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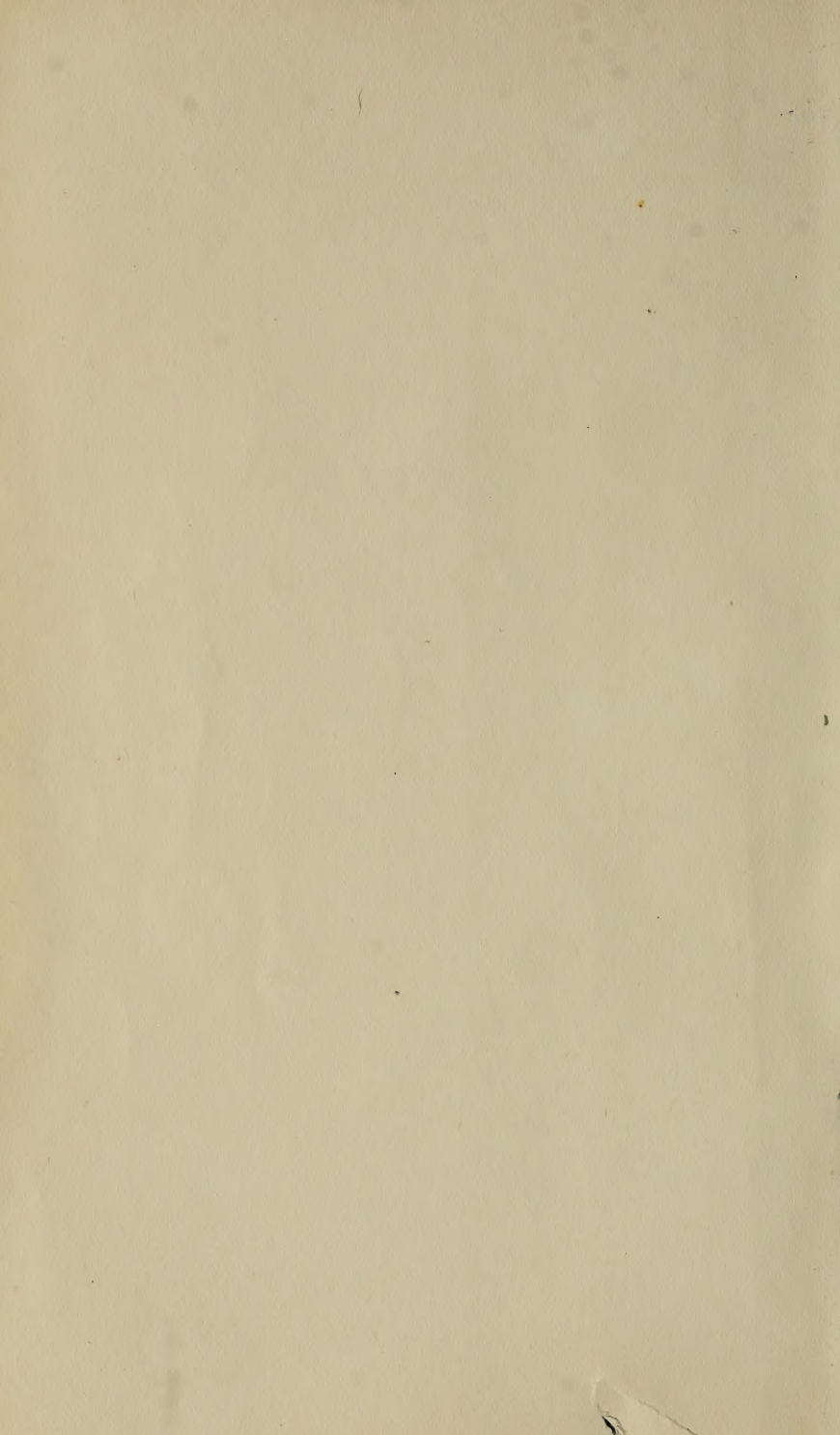
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THE
REPORT
OF THE
CHIEF ENGINEER
OF THE
PACIFIC AND ATLANTIC
RAIL ROAD COMPANY.

WILLIAM J. LEWIS, *Chief Engineer.*

1852.

REPORT

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REPORT

CHIEF ENGINEER

PACIFIC AND ATLANTIC

RAIL ROAD COMPANY

WILLIAM L. GARDNER
CHIEF ENGINEER

1892

REPORT

OF THE

CHIEF ENGINEER.

To the President and Directors of the Pacific and Atlantic Rail Road Company:

GENTLEMEN:—In compliance with your instructions, the Engineer department was organized, and the preliminary surveys for a rail road connecting the cities of San José and San Francisco, were commenced on the 18th. of September last. Since that date, the intervening ground has been thoroughly examined, and a line of location established.

It will be proper, before noticing the surveys, to give a brief topographical description of the country traversed by the road. The city of San José is situated 13 miles south of the head of San Francisco Bay, near the middle of the beautiful and fertile valley of Santa Clara, which has at this point, a width of about 18 miles.

The general course of this valley is nearly parallel to the Pacific coast, from which it is separated by the Santa Cruz Mountains, while another range (the Contra Costa Mountains) forms its North-

Eastern boundary, and divides it from the valley of the San Joaquin. The last named range terminates to the North, at the Straits of Carquines; and Mount Diablo is its highest peak.

The Santa Cruz range extends North-Westerly to the Pacific Ocean, which it strikes about seven miles South-West of the Golden Gate.

Between these ranges lie the valley of Santa Clara, the Bays of San Francisco and San Pablo, and the City of San Francisco.

On the Western side of the Bay, eight miles South of San Francisco, is an elevated peak called Mount San Bruno, which forms the North-Western terminus of the valley land on the side of the Santa Clara valley. Several high and long spurs extend from this mountain Northward to the Pacific Ocean, and Eastward to the Bay, and give to the promontory on which the City of San Francisco is situated, its rugged and mountainous character.

The Southern arm of the Bay terminates about 30 miles South of San Francisco, and from San Bruno to its head is encompassed by marsh land, overflowed by the tides.

Between the base of the mountains and the wet lands, there is, on both sides of the Bay, an interval of valley land, sloping gently to the Bay, and gradually increasing in width and decreasing in inclination as we advance Southwardly, until at the head of the Bay it forms a continuous plain from mountain to mountain.

The plain near the mountain is composed of a sandy loam, incapable of retaining water, but the lower lands are of an alluvial character.

The streams which issue from the mountains, sink in the higher parts of the valley, and re-appear on the low lands, and form springs and marshes. During the rainy season, the accumulated waters from the mountains rush through deep channels cut in the gravelly soil, and spread themselves over the alluvial lands below. Annually the winter torrent sweeps with it a body of sand which is deposited on the plain. When this sand has accumulated sufficiently, a dam is formed, which is broken by a subsequent action of the water; more sand is carried down and similarly deposited, and thus gradually on each side of the bed of the stream a bank is raised above the level of the natural surface in its vicinity. By referring to the accompanying profile, it will be seen that this curious feature characterizes most of the arroyos crossed by the located line.

In the selection of a proper route for a rail road, it has been my endeavor, having due reference to grades and directness, to place the line as far as practicable on the higher slope of gravel land.

With these remarks, I shall proceed to the

PRELIMINARY SURVEYS.

An experimental line was run, commencing at Peter Davidson's lot, on the South side of Santa Clara street, in the City of San José. A direction parallel to Santa Clara street was assumed and continued across the Guadalupe River and the low lands on the Western side of the stream. The line then curved to the right on a radius of 3820 feet for seven-tenths of a mile, and was continued in a tangential direction 10 3-4 miles to a point South of Mariano Castro's house. The line then curved to the right on a radius of 5730 feet for 1500 feet, and from the termination of this course a straight line was run to a point (marked A on the map) near Angelo's.

The route above described passed a short distance South of the town of Santa Clara, but between San José and Santa Clara it crossed a considerable extent of land subject to be overflowed in the rainy season, which would be avoided by a more Southern line. It was also found that at Campbell's Creek, the Arroyo Cupertino, the Arroyo de las Yeguas, and the Embarcadero of the Rancho de las Pulgas, an improved line could be obtained by keeping further from the Bay. A new position (B) 761 feet South-West of A was therefore assumed, and the survey continued across the San Mateo, and over the land of Jose de la Cruz Sanchez as far as the French Tavern, near the base of Mount San Bruno. Here two routes diverging at the point marked C on the map, presented themselves for examination. One, passing between the mountain and the Santa Cruz range, and crossing a spur of the San Bruno at the gap near the Abbey Hotel, enters the valley of Islar's Creek. The other passes between the Bay and Mount San Bruno, and crosses the spurs of the mountain which intervene between this mountain and San Francisco.

The Western line first received our attention, and a survey was made across the Abbey summit and continued to the Mission Dolores. The summit near the Abbey has an elevation of 299 5-10 feet above high tide. The level of the ground at the Nightingale Hotel in the Mission Dolores, which may be assumed as the general level of the plain, is 34 feet above high tide—neither is it practicable to construct a rail road, the grade of which at the Mission shall differ materially from this level. The distance from the Abbey summit to this point is 4.73 miles. Hence, assuming a depth of cut of 38.5 at the Abbey summit, a grade of 48 feet to the mile is required to reach the Mission. In addition to the serious disadvantage of using so high a grade, this line presents, in many parts, an exceedingly irregular profile. At the summit of the ridge dividing Islar and Precito Creeks (South of the Race Course) a depth of cutting of 104.5 feet would be necessary in order to maintain this grade.

It will be observed that both Islar and Precito Creeks flow into the tide marsh West of Capt. De Frees' house, and that the dividing ridge terminates abruptly to the East at the head of the marsh. An attempt was made to pass around the ridge in this direction, but the ground was so broken, it was found impracticable.

The preliminary examinations on the Bay line, fully demonstrated its great superiority over this route.

Returning to the position C, near the French Tavern, the survey was extended to a point (D) on the shore of the Bay, near San Bruno. Here the line of location evidently required that it should cross an angle of the Bay. Also an inspection of the ground showed that an accurate survey of the shores of the Bay, from this position to near Hunter's Point, was necessary, to determine the proper location of the line. This was accordingly made, and the whole accurately plotted. The result of these examinations showed that it was requisite that the line of location should pass from Point San Bruno, across the indentations of the Bay, to the extremity of the projecting point, which is the termination of the spur of San Bruno, which shuts in Visitation valley on its Northern side. A proper position (E) was assumed beyond this point, and surveys carried across two depressions in the spur which forms Hunter's Point, or South San Francisco. The most Eastern depression (marked E on the map) is 88 feet, and the Western (marked F) 69 feet above tide. The last named position, in addition to the advantage of its lower level, enables us to continue the line beyond this point on the side-hill at the head of the marsh, North of Capt. De Frees', thus avoiding all the marsh land except 800 feet at the mouth of Islar and Precito Creeks.

Following this side-hill, the surveys were conducted to a point (G) a short distance East of the Race Course. From this point to Third street in San Francisco, two lines were examined and found practicable. One passes by the Mission Dolores, a short distance East of the Nightingale Hotel and across the intervening sand hills, in a direction parallel to Mission street, until it intersects Third street in San Francisco. The other crosses Mission Creek at the brick kiln, and entering the city in a direction oblique to the course of Mission and Howard streets, likewise terminates at Third street. This line presents the most favorable profile, and has been adopted as part of the location.

In this connection, I may also state that a line was examined from near the corner of Market and St. James streets, in San José, crossing the Alameda gardens, belonging to Com. Stockton, and entering Santa Clara near the Southern corner of the Mission orchard. Thence it was continued until it intersected — street, and along this street to the line already described.

This line passes over a great extent of marshy ground, will be expensive in its construction, does great injury to private property, both on the Rancho of Com. Stockton and in the town of Santa Clara, and has no claims sufficient to warrant its adoption.

After the conclusion of the preliminary surveys, the Engineer corps proceeded to complete the location, adopting as portions of the located line, such parts of the experimental survey as could properly be included.

LOCATION.

Beginning in the City of San José at the middle of San Fernando street, and on the South-West side of Market street, the line follows the course of San Fernando street 4521 feet, crossing the Guadalupe River above Mr. Suñol's Mill, by a pile bridge 200 feet in length, and the low grounds beyond by an embankment. It then curves to the right on a radius of 5730 feet, until it enters Dr. Hepburn's enclosure, when it assumes a straight direction which is continued 8.8 miles to a point near the Arroyo Cupertino, South of Mr. Creighton's house.

Curving again to the right, it crosses the Arroyo Cupertino, and pursues a direct line 2.7 miles, when it deflects to the right and attains a course which it follows for 6.6 miles, crossing the Arroyo de las Yeguas by a bridge 70 feet in length, and San Francisquito Creek, South of the present bridge, by a bridge 100 feet long. The course of the road then deflects three degrees and is located on a straight line, passing North of Angelo's house and crossing the San Mateo by a bridge of 100 feet span.

From San José to Angelo's the country presents to the eye the appearance of an almost level plain. But an inspection of the accompanying profile shows that there is considerable variation in the absolute height of different points, although the undulations are hardly perceptible to the casual observer.

From Angelo's to San Mateo there is but a narrow valley between the base of the hills and the Bay, and beyond San Mateo many of the spurs extend to the Bay.

From San Mateo the line is traced along the side hill deflecting to the left as we approach the residence of Chino Sanchez and again to the right near the house of Jose de la Cruz Sanchez. At the French Tavern it curves to the right, and crossing a stretch of low land, pierces a sandy ridge and attains the shores of the Bay near Point San Bruno.

The line now curves around the rocky point of San Bruno and is located in a straight direction to the extremity of the bluff forming the northern boundary of Visitation valley.

Here it is designed to construct a pile bridge 13,300 feet in length.

The character of the bottom of the Bay was ascertained by careful soundings at a number of points in the located line.

The average depth of water at high tide is 10 feet, and the average depth of mud 23 feet. There is great uniformity in the depth of water and character of the bottom, and there is everywhere sufficient depth of mud to give adequate stability to the piles.

The bridge is estimated for piles 45 feet in length, (6 being driven at each bent,) and the bents are placed 10 feet apart. The piles are then capped and braced, and the bents connected by 4 longitudinal stringers, two 8 by 14, and two 10 by 14 inches, the latter designed to be directly under the rails of the track. The bridge, which is 15 feet in width, is covered with three inch plank, on which the iron rails are laid.

I have stated particularly the mode in which it is proposed to build this part of the work, as its cost forms the largest item in the expense of constructing your road.

It is designed to fill up the space between the shores and the ends of the pile bridge with solid embankment.

From the northern end of the pile bridge the line curves to the left, and passing the rocky point leaves the Bay and crosses the South San Francisco ridge at the point already indicated, 69 feet above tide water.

At this summit we have estimated a depth of cutting of 33 feet, which places the grade line at 36 feet above tide.

The line then crosses Islar's Creek and is conducted along the slope of the high ground at the head of the marsh three fourths of a mile above Captain De Frees' house. Thence, crossing Precito Creek and passing east of the race course, it curves to the right, and assuming a straight direction near the brick kiln crosses Mission Creek on a bridge 150 feet in length and enters the City of San Francisco. This line was continued in the same direction to Third street, which it intersected between Howard and Mission streets. From this point, where the survey terminates, the line can be conducted to the wharves of the Bay, without encountering any difficulties as regards curvature or grades.

The height of the grade line at Third street is 15 feet above high tide.

The whole length of the road from Market street, San José, to Third street San Francisco is 48.04 miles.

Of this distance there are of straight lines	42.07 miles.
Of curves having a radius of 8,595 feet	1.14 "
" " " 7,473 "	0.64 "
" " " 5,730 "	1.95 "
" " " 2,865 "	2.24 "
	48.04 miles.

There are of level road	15.78 miles.
Of gradients under 5 feet to the mile	2.06 "
do. over 5 ft. and not exceeding 10 feet.	4.83 "
do. " 10 " " " 15 "	8.73 "
do. " 15 " " " 20 "	9.77 "
do. " 20 " " " 21.6 "	6.87 "
	48.04 miles.

The graduation has been estimated for a road bed 16 feet in width on embankments, and 20 feet in excavations, the sides having a slope of 1 1-2 feet horizontal to 1 foot perpendicular. On the first division, from San José to San Mateo Creek, six-sevenths of the earth work consists of *borrowed earth* and *spoil bank*; or, in other words, the road bed is made by forming the embankments from the side ditches, and by removing the earth in the cuts and depositing it on the adjacent banks—neither process requiring the employment of horses and carts. There are no deep cuttings above (or South-East) of Point San Bruno, and no rock will be encountered. Between San Bruno and Mission Creek, there is rock in all the spurs and ridges crossed by the line of location.

The present cost of rail road iron in Liverpool is £5 per ton, and freight from that port to San Francisco, from £2 10s. to £3 per ton. The duty, which is 30 per cent., is charged on the prime cost—commissions and all charges arising at the port of embarkation. It will be seen that the price estimated, \$50, allows a considerable margin on these rates, and is sufficient beyond a doubt, should rails in Europe continue at the present very low figure.

It will be the policy of the Company to commence laying the superstructure at points in the vicinity of landings accessible by vessels navigating the Bay. Launches freighted with iron can unload at the head of Mission Creek, at the embarcadero of the Sanchez Rancho, at San Mateo Creek, at the embarcadero of the "Rancho de las Pulgas," South of Angelo's, and at the landing on San Francisquito Creek; all of which are in immediate proximity to the road. From the two latter points, the Santa Cruz Mountains, where an abundance of red-wood timber can be procured, are not more than five miles distant. This wood is less subject to decay than any known in the Atlantic States, and no better material for cross ties can be desired.

TABLE
OF GRADES ON THE PACIFIC AND ATLANTIC RAIL ROAD.

<i>No. of Grades.</i>	<i>Length of Grade in miles.</i>	<i>Grade per mile in feet.</i>	<i>Rise of Grade in feet.</i>	<i>Fall of Grade in feet.</i>	<i>Elevation above high tide in feet.</i>
1.	.57	Level.			96.
2.	1.03	17.6	18.		114.
3.	1.03	Level.			114.
4.	1.36	8.8		12.	102.
5.	.97	10.5		10.2	91.8
6.	.45	Level.			91.8
7.	.97	1.75	1.7		93.5
8.	2.84	12.8	36.5		130.
9.	.62	8.8	5.5		135.5
10.	.91	11.4		10.4	125.1
11.	3.30	20.6		68.1	57.
12.	1.47	15.8		23.4	33.6
13.	.40	Level.			33.6
14.	2.04	20.	41.4		75.
15.	1.14	7.75		8.8	66.2
16.	2.10	21.6		45.5	20.7
17.	.74	15.8		11.7	9.
18.	1.09	2.8	3.		12.
19.	1.76	Level.			12.
20.	.91	19.8	18.		30.
21.	.91	16.		15.	15.
22.	1.36	Level.			15.
23.	.74	9.5	7.		22.
24.	.97	12.	12.		34.
25.	.91	17.6	16.		50.
26.	.97	18.		18.	32.
27.	1.53	11.		17.	15.
28.	2.59	Level.			15.
29.	.97	5.28	5.		20.
30.	.79	19.		15.	5.
31.	5.12	Level.			5.
32.	1.47	21.2	31.		36.
33.	1.93	Level.			36.
34.	1.51	14.		21.	15.
35.	.57	Level.			15.
48.04					

SUMMARY.

<i>Length of Level in miles.</i>	<i>Length of gradients in miles.</i>			
	<i>From 0 to 5 ft.</i>	<i>From 5 to 10 ft.</i>	<i>From 10 to 15 ft.</i>	<i>From 15 to 21.6 ft.</i>
15.78	2.06	4.83	8.73	16.64

STATEMENT OF
LENGTH OF STRAIGHT LINES AND CURVES.

<i>No.</i>	<i>Straight Line. Miles.</i>	<i>Radius 8595 feet. Miles.</i>	<i>Radius 7473 feet. Miles.</i>	<i>Radius 5730 feet. Miles.</i>	<i>Radius 2865 feet. Miles.</i>
1.	0.86	—	—	—	—
2.	—	—	—	1.04	—
3.	8.79	—	—	—	—
4.	—	—	—	0.16	—
5.	2.71	—	—	—	—
6.	—	—	—	0.15	—
7.	6.61	—	—	—	—
8.	—	—	—	0.06	—
9.	10.05	—	—	—	—
10.	—	—	—	0.18	—
11.	2.56	—	—	—	—
12.	—	—	—	0.36	—
13.	2.08	—	—	—	—
14.	—	1.14	—	—	—
15.	—	—	0.64	—	—
16.	2.21	—	—	—	—
17.	—	—	—	—	0.24
18.	2.37	—	—	—	—
19.	—	—	—	—	0.45
20.	1.48	—	—	—	—
21.	—	—	—	—	0.63
22.	0.22	—	—	—	—
23.	—	—	—	—	0.45
24.	0.78	—	—	—	—
25.	—	—	—	—	0.47
26.	1.35	—	—	—	—
	42.07	1.14	0.64	1.95	2.24

ESTIMATES.

ESTIMATE OF COST OF GRADUATION, MASONRY AND BRIDGING.

FIRST DIVISION.

From San José to San Mateo Creek, 29.66 miles:

255,960 cub. yds. earth work, 30 cts.	\$76,788.00
43,561 " " " 42 "	18,295.62
765 " bridge masonry, \$10	7,650.00
Superstructure of bridges,	12,100.00
Grubbing and clearing,	6,000.00

\$120,833.62

SECOND DIVISION.

From San Mateo Creek to the beginning of the pile bridge at Point San Bruno, 10.1 miles:

119,094 cub. yds. earth work, 30 cts.	\$35,728.20
42,754 " " " " 36 "	15,391.44
56,231 " " " " 60 "	33,738.60
2,675 " " Bridge Masonry, \$9	24,075.00
Superstructure of Bridges,	8,000.00

\$116,933.24

THIRD DIVISION

Includes the proposed pile bridge across the indentation of San Francisco Bay, North of Point San Bruno, 2.52 miles:

13,300 ft. of pile bridging, at \$25,	\$332,500.00
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FOURTH DIVISION.

From the North end of the pile bridge to the Race Course, 3.47 miles:

214,371 cub. yds. earth work, 40 cts.	85,748.40
50,457 " " rock, \$3,	151,371.00
706 " " arch masonry, \$10,	7,060.00

\$244,179.40

FIFTH DIVISION.

From the race course to Third street, San Francisco, 2.28 miles:

78,553 cub. yds. earth work, 40 cts.	\$31,421.20
6,147 " " rock, \$3.00	18,441.00
921 " " masonry, (abutments to bridge over Mission Creek,) \$9,	8,289.00
Superstructure of bridge over Mission Creek, 150 feet, at \$40,	6,000.00

\$64,151.20

SUMMARY OF COST OF GRADUATION, MASONRY AND BRIDGING.

First Division, 29.66 miles,	\$120,833.62
Second " 10.10 "	116,933.24
Third " 2.52 "	332,500.00
Fourth " 3.48 "	244,179.40
Fifth " 2.28 "	64,151.20
	\$878,597.46

ESTIMATED COST OF ONE MILE OF SUPERSTRUCTURE:

88 tons rails, (56 lbs. per yard) at \$50,	4,400.00
660 chairs, 16 lbs. each—10,560 lbs.—at 6 cts.	633.60
4000 lbs. spikes, at 6 cts.	240.00
2000 sleepers, 7 1-2 ft. long, 6 by 7 in. at 60 cts.	1,200.00
Laying track and distributing material,	1,000.00

Total for one mile, \$7,473.60

Cost of 51 miles of superstructure, (including 3 miles for side tracks, and extension of the road to the wharves of San Francisco,) at \$7,473.60,	\$381,153.60
Graduation, masonry and bridging,	878,597.46

\$1,259,751.06

Add for superintendence, ten per cent.,	125,975.11
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Total cost of constructing the road,	\$1,385,726.17
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BUILDINGS AND FIXTURES.

Two depots, at \$10,000 each,	\$20,000
Six way stations, \$500 " " " " " "	3,000
Two engine houses, \$5,000 each,	10,000
One machine shop,	10,000
Two turning tables, \$3,000, " " " " " "	6,000

Total, \$49,000.00

LOCOMOTIVES, CARS, ETC.

Five locomotive engines and tenders, \$9,000,	\$45,000
Ten passenger cars, \$3,000,	30,000
Four baggage " 1,000,	4,000
Six platform " 800,	4,800
Twenty covered freight cars, \$1,000	20,000
Six hand freight cars, \$100,	600

Total, \$104,400

The total cost of the Rail Road, buildings and running fixtures, will consequently be as follows:

Construction of Road,	\$1,385,726.17
Buildings and fixtures,	49,000.00
Running furniture,	104,400.00
Total,	\$1,539,126.17

It will be observed that the rail road does not leave the valley until it reaches Mount San Bruno, which is but 8 1-4 miles from San Francisco, and that all the expensive part of the graduation occurs on the six miles embraced in the third and fourth divisions. The graduation on the first and second divisions, including five-sixths of the whole length of the road, could be completed, the superstructure laid, and the road put in operation as far as Point San Bruno, within a year.

At the Northern termination of the second division, where it is designed to commence the pile bridge, there is 5 feet water at low tide and ten feet at high tide, and there are no obstructions to navigation between this point and San Francisco. By placing a good steamboat on the Bay, to ply between Point San Bruno and San Francisco and connect with the rail road, passengers could be conveyed from city to city in 2 1-2 hours, and freight in 4 hours.

Vessels also could come to the wharves at Point San Bruno and receive cargoes of agricultural produce destined for Stockton, Sacramento and the mining sections of the State.

The following is an estimate of the amount required for building the road from San José to Point San Bruno:

Graduation, masonry and bridging 39.76 miles (1st and 2d divisions,)	\$237,766.86
Superstructure 41 miles, (including 1.24 miles of side track,) at \$7,473.60,	306,417.60
	\$544,184.46
Add for superintendence 10 per cent.,	\$54,418.44
	598,602.90
Cost of Road from San José to Point San Bruno,	
To which add for	
Wharf at Point San Bruno,	15,000.00
Buildings and fixtures,	35,000.00
Locomotive engines, cars, &c.,	90,000.00
Steamboat on the Bay,	50,000.00
Total,	\$788,602.90

Which is the whole amount required to put the road in operation from San José to San Bruno, and to complete the line of communication to San Francisco by steamboat.

It will thus be seen that many of the advantages to be derived from the construction of the rail road can be obtained at an outlay little above one half the whole cost of constructing the road. We have no doubt that it will be the true interest of the stockholders to complete the line at as early a day as is practicable throughout its whole extent, and the object of the preceeding remarks has merely been to show that you may safely commence the construction of your work when the subscription to the stock amounts to \$790,000.

SOURCES OF REVENUE.

We shall now endeavor to ascertain what will be the probable amount of business on your road. In an address of the committee appointed at a public meeting of the citizens of San José in relation to the feasibility and expediency of a rail road between San José and San Francisco, adopted Jan'y. 29th, 1851, they say :

"During the last seven months the amount of passenger travel between this place and San Francisco has not been less than 10,500 at an average expense of \$16 each, making a total of \$168,000.— During the same time, about 2,000,000 feet of lumber were brought to the Embarcadero at an average cost of \$15 per thousand feet, amounting to \$30,000 ; to this must be added \$30,000 for other freight. In this enumeration we omit the immense quantities of hay, wood, brick, potatoes, quicksilver, cattle and various other articles which have been transported to San Francisco by water or land. To this we must add the cost of carting to and from the Embarcadero. Some estimate may be formed of the enormous item of this expense, by the fact that one firm, and that not one of the largest, has paid during six months over \$3,000.

"These facts justify the supposition that the expense of transportation for the six months ending Decémber 31, 1850, has not been less than \$300,000, or more than one-sixth the entire receipts of all the rail roads in Massachusetts.

"The history of rail roads has established the fact that in a short time they greatly increase the amount of freight and travel, particularly the latter. Our wisest rail road directors abroad lay it down as a rule, that any route will sustain a rail road, when the expense of grading comes within reasonable limits, and that sustains a daily stage, because the increased facilities for traveling afforded by a rail road, invariably increase the number of travelers. When merchants, living sixty or one hundred miles from the city, can enter the cars in the morning, make their purchases, and return the same day, their visits increase more than ten fold."

Since this address was written, another season has passed away, in which the amount of passenger traveling has been more than doubled, and the aggregate of freight has also greatly increased.—

There are now three lines of communication between San José and San Francisco—one daily, by Messrs. Hall & Crandal's splendid line of coaches, and two tri-weekly, connecting with steamboats at Alviso and Union City. The daily average of through passengers each way cannot be less than 50 persons.

The President of the Company has taken the pains to collect the following statistics:

PRODUCE SHIPPED FROM SANTA CLARA VALLEY TO SAN FRANCISCO THE
PAST SEASON.

Barley,	3,292 tons.
Potatoes,	6,416 "
Hay,	10,700 "
Fruit, (chiefly from the Missions,)	450 "
Lime,	1,200 "
Tomatoes,	169 "
Cabbages,	710 "
Onions, Beets, Pumpkins, Corn, Carrots, Turnips and Melons,	3,900 "

26,837 "

From the New Almaden Mines, there has been shipped
of Quicksilver and flasks, during the current year, 2,000 tons.

28,837 "

There have been driven to San Francisco from Santa Clara valley and through the valley from the Southern part of the State:

20,000 beeves, at 400 lbs. each,	4,000 tons.
25,000 sheep, 75 "	937 "
10,000 calves, 75 "	375 "
5,000 hogs, 150 "	375 "

5,687 "

Number of tons of freight brought into Santa Clara valley in the year 1851, consisting of merchandize, lumber, flour, farming utensils &c. as derived from merchants in San Jose, Santa Clara, Alviso, and persons engaged in freighting, 17,400 tons.

Let us now see what the people of Santa Clara valley have paid the present season for transporting their merchandize to market. The average cost of freight, including the expense of land transportations for the distance over and above what will be required to reach the rail road has not been less than \$15 per ton.

Down freight 28,837 tons at \$15,	\$432,555
Up freight 17,400 " " 15,	261,000
For driving live stock and loss of weight we shall estimate 1-2 ct. a pound or \$10 per ton, 5,687 tons beeves, sheep &c. at \$10,	56,870
Total,	<u>\$750,425</u>

The number of passengers traveling by public conveyances between San José and San Francisco may be safely estimated at an average of 25 a day each way for the six months ending June 30th, and for the six months ensuing at 40 a day each way. The average rate of fare for each passenger for the former of these periods was \$14, and for the latter about \$10.

50 passengers for 181 days—9050 passengers—at \$14,	\$126,700
80 " 184 " 14,720 " at \$10,	147,200
Total from passengers,	<u>\$273,900</u>
do. " freight,	<u>750,425</u>
Total,	<u>\$1,024,325</u>

It appears then that the conveyance of persons and freight between Santa Clara valley and San Francisco will actually cost, during the present year, more than one million dollars.

Let us now turn our attention to another source of revenue.

San Francisco is barricaded by sand hills, from which we do not escape until we reach the Mission Dolores, and hither all the pleasure-seeking part of the population resort for relaxation and amusement. Here are the first gardens we meet with, and here also is the race course and the arena for the exhibition of the combats of bulls and bears. On Sundays and holidays the road is thronged with omnibuses, carriages, men on horseback, and pedestrians. The number of passengers carried to and from the Mission, by public conveyances alone, has been ascertained to be 4,000 a month, or at the rate of 48,000 per annum. When the means are provided by the construction of a rail road for easy and cheap access to the country, many merchants will undoubtedly secure residences for their families either at the Mission, or at more distant localities.

The mildness and salubrity of the climate of San José will make it a favorite abode for invalids, and for many whose business does not require their constant presence in San Francisco. From the Mission Dolores to the Pass of the San Bruno Mountain, near the Abbey Hotel, the public road passes over deep gulches, and from the Pass to the foot of the mountain on the South side, it traverses

sand hills for several miles. In a word, it is, and always must be, a bad road, and it would seldom be traveled were the rail road built.

The Southern base of San Bruno is, by our line, less than nine miles from San Francisco, and above this point is a large body of land well adapted for grazing or culture. The difficulty of access to the market makes the land at present of little value, but the rail road will create and engross a considerable amount of travel and traffic at this point. As we proceed Southward, the land improves in quality until we reach the head of the Bay.

The valley of Santa Clara extends from the Southern extremity of the Bay of San Francisco, to the Mission San Juan Bautista, a distance of fifty miles, and it embraces an area of not less than six hundred square miles. The land is probably not surpassed in fertility by any in the world, and all its products must become tributary to your road. The adjacent hills also abound in mineral wealth. Limestone is found in the low hills on both sides of the valley, and the large quantity of Quicksilver sent from New Almaden will be greatly increased by the products of the Guadalupe and San Antonio Mines.

Having intimated some of the sources of revenue, we shall now present an estimate of the business of the Company for the first year it is in operation.

Estimate of probable receipts of the Pacific and Atlantic Rail Road Company, the first year subsequent to its completion.

PASSENGERS.

150 through passengers (75 each way) daily, or 54,750 per annum, at \$5,	\$273,750
50 way passengers (25 each way) daily, from all the way stations except the Mission Dolores, or 18,250 per annum, at \$2,	\$36,500
70,000 to and from Mission Dolores, 50 cts.	\$35,000
Total income from passengers,	\$345,250.

FREIGHT.

Down freight, 40,000 tons, at \$5,	\$200,000
Up freight, 25,000 " at \$5,	\$125,000
Total income from freight,	\$325,000
Total income from freight and passengers,	\$670,250

EXPENSES.

Deduct expenses as follows :

Repairs of locomotives, passenger, baggage and freight cars, (equal to one-half their original cost),	\$52,200
3,500 cords of wood, at \$10,	\$35,000
Oil,	\$4,500
Salaries, wages, and incidental expenses chargeable to passenger department,	\$30,000
do. " " to freight department,	\$30,000
Repairs of road, and reserved fund for renewing and improving the same,	\$50,000
Salaries of President, Superintendant, and Treasurer, law expenses, &c.,	\$50,000
	\$251,700
Balance nett revenue,	\$418,550

or 27.19 per cent. on \$1,539,126.17, the cost of the road, fixtures, and equipment.

It is difficult to estimate the increase in passengers and freight which will be created by the construction of a rail road. The natural progress of population and business is so rapid in the United States, that it is impossible to ascertain what proportion of the increased traffic which has followed the construction of rail roads, was a direct consequence of that fact, and what was owing to extraneous causes. We trust, however, that we shall have no difficulty in showing that the estimate we have made of the receipts of the road during the first year of its operation, is not too high, and that in a very short time the annual revenue must greatly exceed that amount. Baron Charles Dupin, in his "Report on the Paris and Orleans Railway," makes the following statements :

"Experience has proved, both in France and abroad, that in a short space of time the facility, expedition, and economy afforded by railways more than doubles the number of passengers, and the quantity of merchandize.

"In order to support such statements, we will quote the following facts relative to the railways of Belgium, England and Scotland, in positions of extreme difference, and giving rise to a variation in the returns which far exceeded all anticipation :

"Comparison of the number of travelers conveyed daily throughout a whole or a portion of the line :

RAILWAYS.	No. of pass. before the establish- ment.	No. of pass. after the establish- ment.
Manchester and Liverpool,	400	1,620
Stockton and Darlington,	130	630
Newcastle and Carlisle,	90	500
Arbroath and Forfar,	20	200
Brussels and Antwerp,	200	3,000

Increase of the number of Passengers by the establishment of a Railway.

Liverpool and Manchester,	300	per cent.
Stockton and Darlington,	380	" "
Newcastle and Carlisle,	455	" "
Arbroath and Forfar,	900	" "
Brussels and Antwerp,	1,400	" "

" Thus, even taking, as a criterion, the road on which the proportional increase is least of all, we still find that the number of passengers will be not only 100 but 300 per cent. The transport of merchandize will experience a similarly rapid increase."

Edward Teisserence, an agent of the French Government, in an official communication in relation to English railways, says :

" The Darlington Railway has produced, by its low rates of passage and freight, a complete revolution in the region of country which it traverses. It has increased the value of land 100 or 200 per cent. By these low rates, the freight estimated at 80,000 tons, has been increased to 640,000 tons. The passengers estimated at 4,000, have been increased to 200,000."

The following extract on the influence of railways in developing the resources of a country, is taken from the second Report of the Irish Railway Commissioners :

" On the Newcastle and Carlilse road, prior to the railway, the whole number of persons the public coaches were licensed to carry in a week were 343, or both ways, 686. Now, the average daily number of passengers by railway for the whole length, viz: 61.8 miles, is 228, or 1,596 per week.

" The number of passengers on the Dundee and Newtyle Line exceeds at this time 50,000 annually; the estimated number of persons who performed the same journey previous to the opening of the railway having been 4,000.

" Previous to the opening of a railway between Liverpool and Manchester, there were about 400 passengers per day, or 146,000 per year, traveling between these places by coaches, whereas the present number by railway alone, exceeds 500,000.

"In foreign countries the results arising from the same cause, are equally, if not more striking. The number of persons who usually passed between Brussels and Antwerp, was 75,000 in the year; but since the rail road has been opened from the former place to Malines, it has increased to 500,000; and since it was carried through to Antwerp, the number has exceeded a million. The opening of a branch from Malines to Termonde appears to have added 200,000 to the latter number, so that the passenger traffic of that rail road superceding a road traffic of only 75,000 persons, now amounts to 1,200,000."

The following tabular statement of several rail roads in Massachusetts shows the estimated number of passengers before these roads were built, and the number transported upon them during the year 1848:

<i>Name of Road.</i>	<i>Estimated No. of pass. before opened.</i>	<i>No. of pas- sengers car- ried in '48.</i>
Boston and Worcester,	23,500	807,143
Boston and Lowell,	37,400	525,764
Fitchburg,	71,790	745,825
Eastern,	121,700	1,021,169
Boston and Maine,		1,057,569
Boston and Providence,		569,127
Fall River,		241,107
		4,967,704

The preceding statement not only exhibits the wonderful increase in the amount of traveling on the four roads first mentioned, since these works were constructed, but it also shows that the aggregate number of passengers conveyed annually on the seven rail roads which diverge from Boston amounts to nearly five millions of persons, or to twenty-five times the entire population of that city.

But a few years shall pass away before the population of your great commercial capital will be equal to that of Boston at this date. Rail roads even now are projected and will soon be commenced, from Stockton and Sacramento to the gold mines. As soon as these are completed, (and they will afford a rich harvest to the stockholders,) the produce of Santa Clara valley will pass over your road, not only for the supply of San Francisco, but for the whole of the eastern section of the State. What a prospect does this open for the valley, and who can estimate the accruing traffic on your road. The actual cost of transporting produce from the

vicinity of San José to the nearest gold mines is at this moment at least \$100 per ton. Construct these roads and it will be delivered at one-fourth this cost. There are, besides, many articles of a perishable nature with which they will be supplied, which are now entirely beyond their reach. The saving to the people of New York in the price of milk and vegetables by the construction of the Erie Rail Road was \$960,000 per annum. What will the saving be to the people of San Francisco, Stockton, Sacramento, and the mining districts by the construction of your road? When the rail road is built to San José, reasons as imperious as those which now urge you to begin your enterprise, will demand the continuance of the road to the South. In a few years the rail roads constructed in other parts of the State will be united to yours by connecting links, and your road will be the artery through which these life-giving veins will pour their rich streams into San Francisco, which may, to continue the figure, be appropriately termed the heart of the State.

You have judged properly when you have assigned to your road the position of the most Western link in the great chain of rail roads which, before many years, will extend from the cities of the Atlantic sea board, to the commercial metropolis of the Pacific coast.

No one can seriously entertain the idea that a public work of this magnitude will terminate at any other point than the City of San Francisco, and to reach this termination it must enter the valley of Santa Clara, and unite with your road. I have not the temerity to attempt the discussion of the national and commercial importance of this gigantic project. The execution of this task would require an amount of information I do not possess, and a political foresight to trace the future progress of the American people in the arts of civilization, and in extending those arts to distant countries, which can only be claimed by the wisest statesmen of the age.

I cannot close this report without expressing my obligations to Mr. A. T. ARROWSMITH, Principal Assistant Engineer, for his valuable co-operation in the field, and for his assistance subsequently, in preparing the Profiles and Estimates.

I desire also to acknowledge the services and amiable deportment of Messrs. W. A. ELIASON, L. B. HEALY, and A. W. THOMPSON, Assistant Engineers on the line of survey.

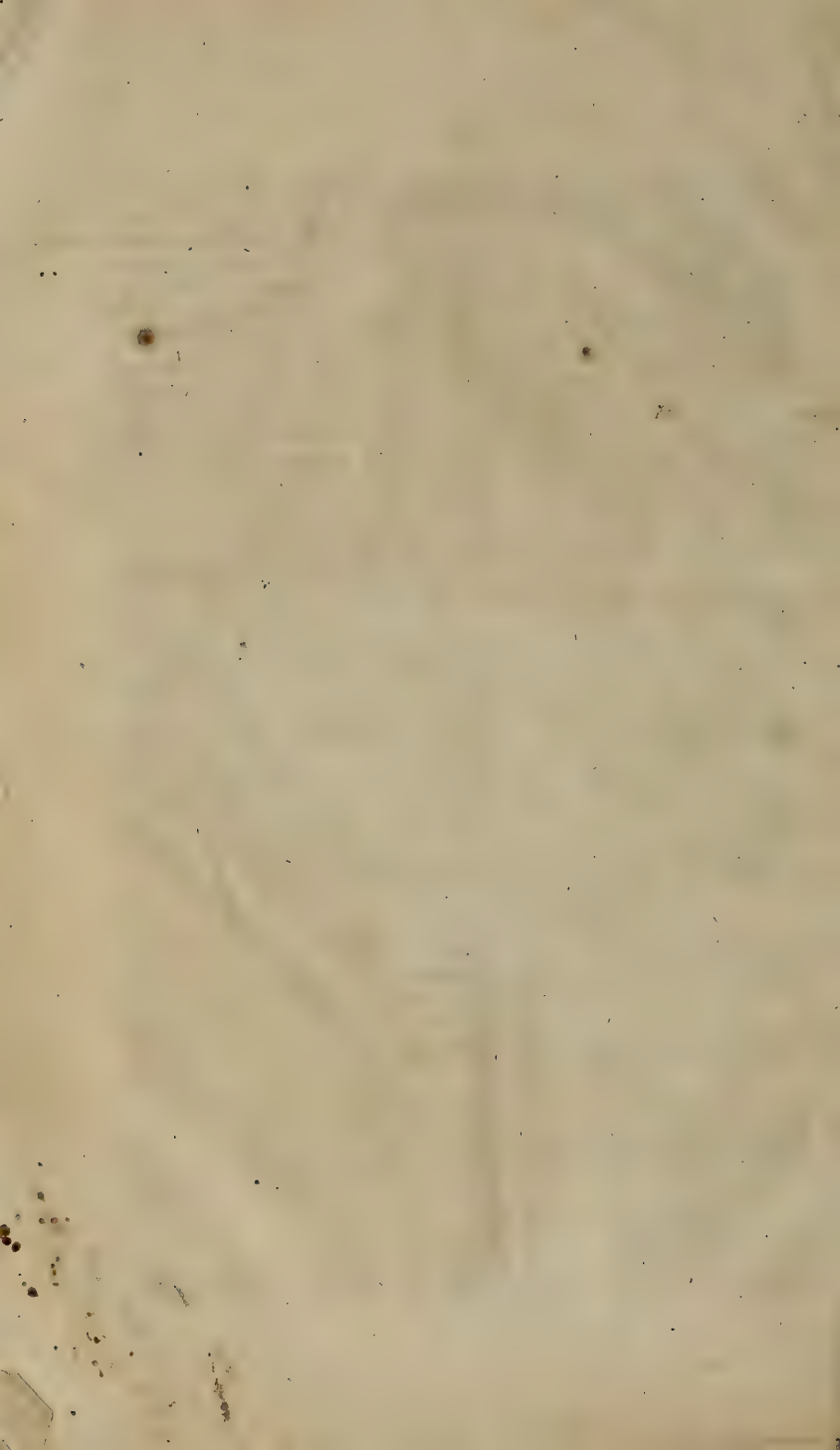
The map which accompanies this report has been executed with great care and precision by my Associate, Mr. SHERMAN DAY, and exhibits very clearly the topography of the country in the vicinity of the line of location.

WILLIAM J. LEWIS,

Chief Engineer.

SAN JOSE, DECEMBER 13, 1851.





Presented by Licent
R. S. Williamson
ENGINEER'S REPORT
Aug 18

— OF THE —

PRELIMINARY SURVEYS, BUSINESS AND CONNECTIONS

— OF THE —

California Northern Railroad,

MADE TO THE PRESIDENT AND DIRECTORS.

JULY 30th, 1859,

BY W. S. WATSON,

Chief Engineer and Commissioner of the California Northern Railroad

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SACRAMENTO:

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ENGINEER'S OFFICE, C. N. R. R., }
OROVILLE, BUTTE CO., CAL., }
JUNE 21ST, 1859. }

To the President and Directors of the California Northern Railroad Company :

GENTLEMEN—According to your instructions I have completed a preliminary survey of that portion of your proposed Road lying between the city lines of the City of Marysville and Oroville, and herein present for your consideration the results of my labors.

Before proceeding to detail the several circumstances of the Survey, Location and Business of your proposed Road, it may be necessary to review to some extent, the history and progress of Railroads in this State and elsewhere.

The earliest history of Railroads, like all important inventions of modern times, is within the recollection of most of the present generation. Less than forty years ago, of the one hundred thousand miles of Railroad now traversing the remotest parts of the civilized globe, not one mile existed or was thought of as we now see them ; and if we extend our examinations back one century, we find that instead of traveling, as we now can do, at 60 miles per hour, we find our staid and sober forefathers making one-half the distance in twenty-four hours, with more self-gratification as to their rapid progress than we do with ours.

Less than fifty years ago the journey from Buffalo to Albany was an event in a lifetime, of such moment as few wished to attempt, and requiring by the most rapid communication then in existence, not less than ten, and frequently twenty days to perform.

Less than one hundred years ago, we look to the history of nations, and we as a nation are not there represented ; and if we follow the history of our own race, we trace the thread back to nearly every nationality of Europe. There we find history and information, that to us, seems almost impossible from its supremely slow and motionless movements, and yet we find in that age some of the greatest intellectual giants the world has ever seen, wonderful in every science and mental acquirement but that of locomotion.

In the early part of the 18th century, the journey from Edinburgh to London, a distance of 427 miles, which had to be performed at stated times, was an event more to be dreaded, and required more time to accomplish, than does now a journey from Edinburgh to New York. We find that in 1745, on the commencement of the war between the Houses of Stewart and Hanover, that the news of the landing of Charles Stewart was not known in London for 34 days, a journey that is now made in 8 hours. In France the same state of things

existed. We find that the news of the Battle of Austerlitz, 1805, took 6 days in transportation, which is now performed in 7 hours.

We find in those days and countries no Railroads nor steamboats, where now we find 60,000 miles of Railroad, and one thousand million dollars invested in steamboats. We may safely assert that next to the invention of printing the use of steam as a motive power has done more to advance civilization and progress than all the inventions that have ever been discovered.

The history of the Railroads of the United States is more remarkable still. Nine years ago there was less than 7,800 miles of Railroad in the United States, and now there are nearly 28,000 miles, costing one thousand millions of dollars in construction.

It seems, also, that the increased speed of the locomotive over the stage coach has the effect of whetting the appetite for greater rapidity of movement still. The locomotive, commencing with a speed of 14 miles per hour, in 1827, has attained a speed of 70 miles; and who will venture to assert that this is the limit? It is certain, that within the next ten years such improvements will be made in Railroads and locomotives as will enable them to carry us at a speed of 100 miles per hour with as much safety and ease as we now move 30 miles.

The era of Railroads in the State of California may be said to have had its commencement in 1852. It became evident to some enterprising and far-seeing men, from the peculiar formation of the great valley of the State, lying along the foot of her auriferous mountains, from the head of the Sacramento to the head of the San Joaquin, that the entire business of the country might be collected, and, like the waters of her mountain streams, transported to the natural outlet on the Pacific.

Various were the plans and projects put forward to secure this great object. Numbers of Railroad Companies were organized, having in some degree the same object in view, which, until the year 1854 resulted in nothing but making surveys and reports, and allowing the projects to expire by limitation. In May, of 1854, the first practical step towards building a Railroad was taken by the Sacramento Valley Railroad Company. C. L. Wilson, of San Francisco, the President of the Company, having full control of the stock and franchises of the Company, succeeded in enlisting capitalists in New York and Boston in his enterprise, and after having secured the assistance of an eminent New York Engineer—Theo. D. Judah, Esq.—at once commenced the construction of his Road, which was to commence at the City of Sacramento and extend to the foot hills east on the American River, with the great object in view of branching north and south to the head of the valley, both ways.

In due course of time the 22 miles of Road forming what is now the Sacramento Valley Railroad, was completed; but such was the difficulty and expense of procuring funds and materials for the construction of the Road, with the Company's securities, that the Road, when completed, cost little short of \$60,000 per mile. The first step

had been taken, and the theory (which had up to this time been but theory, so far as California was concerned) was now established, that the "iron horse" would make his 60 miles per hour within sight of the Pacific, as well as within the spray and storms of the Atlantic ocean.

Amongst these first Railroad organizations was the Atlantic and Pacific Railroad, a company organized to build a Road from San Francisco to San Jose, thence to Stockton, and thence to connect with Wilson's Railroad system. This company, after having made extensive surveys and reports, held public meetings and acquired considerable notoriety, was doomed to wait the action of more enterprising and auspicious times.

Next in order came the Marysville and Benicia Railroad, in July, 1852. This company proposed to build a Railroad from Marysville to Benicia, to connect with tide-water direct. The policy which dictated this movement, although evidently for the benefit of Marysville, never received the countenance or support of capitalists and Railroad men, for various reasons, and first, from the terminus at Benicia—the capitalists of San Francisco looking upon the construction of this Road as unfavorable to the trade of San Francisco, as in some degree placing Benicia on the footing of a rival for her importing trade. The people of Sacramento were also opposed to its construction, on the ground that Marysville, with this Road to tide-water, would be enabled to compete with her river navigation in a great portion of the trade of central California.

About this time the re-organization of the Sacramento Valley Railroad was also effected by C. L. Wilson, aided by Sacramento capitalists, and for some time the spirit of rivalry ran high between the two cities, but San Francisco capitalists decided to take hold and assist in building the Sacramento Valley Railroad, which at once decided where the first Road in California should be built, and in effect inaugurated the commencement of a system of Railroads the most feasible, and what will one day be the most profitable investment in the United States, viz: the Road along the foot hills.

In 1856 the Sacramento and Benicia Railroad Company was organized, proposing to connect the cities of Sacramento and Benicia. Surveys and reports were made which showed a highly feasible project, but from some cause or other the company failed to put their work under construction, probably for the reason that a large number of the capitalists of San Francisco were engaged to the utmost of their means in the construction of the Sacramento Valley Railroad. This organization also expired by limitation, and was for the time discontinued. The project is, however, one of those Railroad projects in California which will be pursued, and only awaits the right men and auspicious times to carry it through successfully. The entire distance is $58\frac{1}{4}$ miles, and with boats to connect with San Francisco would cost about \$3,000,000, and pay not less than 15 per cent. on that capital.

Through the perseverance and untiring energy of C. L. Wilson, the

Sacramento Valley Railroad was completed to Folsom, and opened February 3d, 1856, and the experiment was proved to the satisfaction of Railroad men, that a Railroad would pay in California, although the Road had cost nearly \$60,000 per mile; not from circumstances which would have ruled in its construction if in an Eastern State, but from the high rates of interest charged on the indebtedness of the company, and from the fact that the principal part of the money used in construction being raised on the securities of the company. The result has been, however, satisfactory, as the receipts of the Road have fully answered the expectations of its projectors, and are steadily increasing. The receipts for the fiscal year ending November, 1858, amounted to \$197,000, while the working expenses were \$76,000; and if the Road had been built with cash it would probably not have cost more than one-half the amount, and would have earned a net revenue of at least 20 per cent. on \$1,200,000 capital stock.

In May, 1847, the California Central Railroad Company was organized, which is in fact (although a separate company) an extension of the Sacramento Valley Railroad northward to Marysville, and another link of the great chain of Railroads already referred to, which will be built north and south through the entire basin of California.

The same man to whom the Sacramento Valley Railroad owes its existence organized the California Central Railroad Company. It may be said to be a Marysville project; and although a large majority of her inhabitants are opposed to its construction, some of her leading men and largest capitalists took a practical view of the matter, aided, no doubt, by former experience, and were induced to embrace the only feasible plan to secure to their city a Railroad connection. Surveys were made, and the contract awarded to C. L. Wilson & Co., who immediately commenced the construction of the Road. The distance is 40 miles, and contracted to be built in 30 months from the date of the contract; nearly 20 miles have been graded, and from present appearances there is nothing to prevent its completion within the time specified.

In the same year the people of Marysville renewed the project of connecting their city with tide-water. This has always been a popular project with the citizens of Marysville, but unfortunately not with capitalists and Railroad men. The company—the Marysville and San Francisco Railroad Company—now proposes to build the Road to Vallejo, on the bay of San Francisco, and have procured valuable franchises and privileges from the State and the counties along the line; have made surveys and reports, and have agents now in Europe negotiating for the construction of the Road; but what success will attend its efforts time only will develop.

The policy of building a line of Railroad along the eastern side of the valley is conceded by all Railroad men; and from the success that has attended the commencement of this system, it must succeed, to the almost entire exclusion of any other Railroad project in this State, until its completion; for we find that capitalists are good judges

of the probabilities of a project being a paying investment, and this is certain—if a Railroad built along the natural line of travel and trade of any country will not pay, it would be useless to attempt the construction of any other.

The natural outlet of all the trade and travel of California is along the western slope of her mountain chain, where by far the great majority of her people must always reside, where nearly all her imports are consumed, and where her hardy and enterprising population will for ages find profitable employment. Consequently, the nearer a line of Railroad comes to these workshops of California the more certain will be the success thereof. This system of Railroad is just as certain to be built, as that we see the snow-capped mountains of the Sierra at noon-day.

Of this system of Railroads the California Northern is an important link, having the control of the trade and travel of all those counties lying to the east and north, among which are some of the most populous and flourishing counties of the State. The counties which may be claimed as tributary to your Road are Yuba, part of Nevada, Butte, Plumas, Sierra, Shasta, Tehama, Trinity, Siskiyou, with a population of 120,000 people, representing not less than \$26,000,000 of assessed valuation.

SURVEY AND LOCATION.

MIDDLE LINE.

THE initial point of survey is at the intersection of Robertson street with the Feather River and Ophir Company's Water Ditch in the City of Oroville; thence curving through a deflection of 42 degrees to the South, it crosses the first bench of Carpenter's Flat, leaving Robinson Hill to the right; thence crossing the Marysville road near Wallace's Race Track, curving thence through 10 degrees to the left, along the side hill to near Wallace's house; thence curving to the right 30 degrees to the gap in the Bluff at the present stage road to Marysville, where it crosses in a cut of 22.62 feet, curving thence to the left 30 degrees—the line runs tangent to the "Prairie House" at station 365; thence the line curves to the right through 10 degrees; thence tangent to Marysville a distance of 16.80 miles.

BRIDGES.

At station 305 the line crosses the "Wyman Creek" on an open culvert or stringer bridge of 14 feet in width and 4.25 feet high. At station 730 the line crosses the north Honcut, a stream of 25 feet in width at high water mark, with perpendicular banks of clay formation, where good foundations can be procured for abutments of the bridge. At station 735 the line crosses the south Honcut, a stream of 22 feet of water way at high water mark, and similar to the other in every particular.

At the Honcut there are three sloughs, beside the two forks of the creek, which will require stringer bridges of 10 feet span each; the bridging on the main streams will not exceed 50 feet; the abutments for bridges of three spans will be made of timber, as it is not expected that any other abutments will be necessary—if, however, the necessity should arise, I propose to use brick in all such cases, which can be procured for \$10 per thousand.

GRADING.

The grading is light throughout the entire line, only one section having over 15,000 cubic yards of earth to move, and of the sections laying between the Prairie House and the City of Marysville, none over 8,000, while the majority are less than 6,000 cubic yards.

GRADES.

The grades on this line are very light, the highest being on section 5, a grade of 42 feet per mile. (See Table of Grades.)

The line here described, called the middle line, is probably the shortest distance between Oroville and the City of Marysville, as follows :

From Oroville to Prairie House.....	6.61 miles.
From Prairie House to Honcut.....	7.24 “
From Honcut to Marysville city line.....	9.56 “

Total.....23.41 miles.

IMPROVED LANDS.

The only improved lands through which this Line runs are, first : Lands on the slough of the Honcut, on section 32 of T. 18, R. 4, E., and sections 6, 7, 18, 19 and 30 on T. 17, R. 3, E. ; the first through a distance of 3,000 feet, the next on the forks of the Honcut, through a distance of 13,800 feet, commencing with Kirby's at station 664 and leaving at Kavern's in Yuba county at station 802 ; from Kavern's to the city line of Marysville, the line does not pass through any improved lands.

RIGHT OF WAY.

From Oroville to the Honcut, the line being on public lands, the right of way has already been donated by Act of Congress of 1854. From the Honcut the land is owned by a Spanish grant, which has been confirmed to Charles Covilland and others, and being unimproved lands it is confidently expected would be donated. The right of way through the improved lands on the Honcut, crossed by the line, a distance of less than 3 miles, can be procured with little or no cost to the Company, and from expressions of opinions of the occupants it is expected that a right of way would be donated outright.

RIVER LINE.

Other lines have been examined—one along the second tier of sections, east of the river, and one along the foot hills. The River Line is tangent for 20 miles, with but two easy curves, one at Kent's and one near McDonald's. This is a highly practical line, cheaper in construction and with easier grades, but from its location, being so near Feather River, it is deemed not advisable to examine at present any further ; the total distance on the River Line is 25.40 miles.

EAST LINE.

The line to which I would call your most particular attention, is the Eastern or Foot Hill Line. This line, from the initial point to the Prairie House, is the same as already described on the middle route, and by a continuation of the tangent from the Bluff to the Prairie House, would cross the Honcut near to Sewell's Ranch, on the Laporte road. At this point your road would receive all the travel of Sierra county, the northern part of Nevada, upper part of Yuba, and such parts of Plumas as choose to reach the valley by the way of Laporte and Strawberry Valley. This point is distant from Strawberry Valley

37 miles, Laporte 51 miles, Camptonville 26 miles, North San Juan 27 miles, Nevada City 34 miles, Bangor 6 miles. This is considered an important point, as the trade and travel to and from the above mentioned points I have estimated at not less than \$70,000 per annum. From this point it may, at some future time, become necessary to construct your road, so as to cross the Yuba River at a point 10 miles above the City of Marysville; but for the present estimate and report I shall entertain only the project of crossing the Yuba at Marysville.

CONNECTIONS.

It will be seen by reference to the accompanying map that your road will make a connection with the California Central wherever that Road may terminate; thence to Folsom; thence by the Sacramento Valley Railroad to Sacramento; and as soon as the San Francisco and Marysville Railroad shall be completed, a communication direct to San Francisco will thus be opened. You will have the choice of connections, either of which will carry out the objects of the Company, and to either of which the business passing over your road will be of sufficient importance to induce those companies to make favorable arrangements for the transportation of your passengers and freight to tide-water and return.

The Central Road being in a forward state of construction, and in all probability will be finished by the Summer of 1860, I would recommend that your road be put under immediate contract, as there is nothing to prevent the entire grading being completed by the time the Central Road reaches Marysville.

BUSINESS.

In estimating the business of your Road it will be seen that the counties tributary to your Road are those lying east of the valley from Nevada, to the extreme north of the State, and embracing part of Nevada, the upper part of Yuba, Sierra, Plumas, Butte, Shasta, Tehama, Trinity and Siskiyou. These counties embrace a territory of about 9,200 square miles, a population of 130,000 people, with an assessed valuation of \$26,726,000. The assessed valuation of the 16 mining counties of the State amounts to \$37,623,000. These counties produce annually about \$60,000,000 from the mines. It may be, therefore, safely presumed that two-thirds of all the gold produced from the mines in California is the production of the nine counties which come immediately under the influence of your Road.

The present trade and travel which is transported between the points forming the termini of your Road, has, within the past year been variously estimated. From observations taken for the week ending the 10th of September, 1858, the passenger movement was by stages 62, and by other conveyances 21 each way per day, while the movements of freight was 17 tons per day each way; while for the week ending the 10th day of December, 1858, the passenger movement was 57 by stages and 17 by other conveyance, and of freight 22 tons each way.

The way passenger movement to Laporte, St. Louis, etc., in the ab-

sence of any certain data, may be safely estimated at 40 passengers each way, and 30 tons of freight per day, which would be carried 12 miles on your Road, while other way passengers and freight movements may be safely estimated at 10 passengers for 10 miles, and 5 tons of freight for 10 miles each way, per day.

The above may be safely estimated as the present business of your Road, without drawing on any anticipated increase or without taking into the account the travel and trade at present carried up the coast to Humboldt, Crescent City, etc., on the western coast, which would be carried on your Road if built through to the head of the valley.

The anticipation of directing the entire trade and travel of Sierra and Plumas, may be further shown to be based on good grounds by reference to the accompanying schedule of distances from Oroville to the towns and populous districts of Sierra and Plumas counties.

It will be seen that Laporte is distant from Oroville 51 miles, and to Marysville 83 miles; to Downieville the distance is not more than 56 miles, which by opening a new road from Downieville to near the mouth of Slate Creek could be shortened to 50 miles, while the distance to Marysville is 74 miles. The population of Sierra county is probably not less than 22,000, with an assessed valuation of \$2,500,000.

The entire trade and travel of Plumas would, as a matter of course, come to Oroville, as most of the travel has been directed to this point by a system of wagon roads across the mountains to Quincy, and by a judicious expenditure of a few thousand dollars, all the freight which is now carried on pack animals to Quincy from Marysville, would undoubtedly seek your Road to Oroville. This portion of the travel has not been estimated, and to it I would call your particular attention.

NATIONAL OVERLAND ROAD.

Under this head I would call your attention to a subject that I have at various times and in various ways brought before the public during the last three years. It has been long known, and generally admitted, that the northern passes are lower and more adapted to the successful working of a Railroad through the Sierra Nevadas, than any of the passes of the southern counties.

No information on which Railroad men can depend has ever been developed. I am, however, now satisfied that a Railroad can be built through one of these passes, from information that I have personally collected. By instrumental observations of a line crossing the mountains at the head waters of Chico, Deer Creek and Butte Creek, I find that the summit at a distance of not more than 60 miles from Oroville, on a line between the waters of the west branch of Feather River and Butte Creek, is 4,869 feet above tide-water, which can be ascended by a line entering from the valley between Chico and Deer Creek at a maximum grade of less than 63 feet, the distance being about 80 miles. From the summit down to the head of Big Meadows on main Feather River, the average grades would not exceed 40 feet per mile, and from Big Meadows to Honey Lake there is no more difficulty in constructing a Railroad than in many districts of the moun-

tain counties of the State of New York, where Roads have been already built. A Wagon Road survey has been made through the Downer summit, 53 miles from Oroville, which leaves little or no doubt of the practicability of a Railroad through the mountains at the head of Chico. The entire distance from the valley at Oroville to Susanville, in Honey Lake Valley, by this survey, is 103 miles, over all of which, with the exception of 3 miles, a stage coach can pass at 7 miles per hour, with the road in its natural state.

I have also examined the best evidences of snow line to be found in any mountainous country, namely : the land marks nature provides—which, with the evidence of the most reliable testimony from old residents on these mountains, I am confident in the opinion that the snow on these mountains would be no more trouble, if as much, to the movements of locomotives, as any Road in the northern part of the State of New York in winter.

It would pay those interested in the construction of Railroads through the northern part of the State, to make a thorough Railroad survey through the Chico Pass to Honey Lake, as it would establish and for ever decide the fate of a Pacific Railroad through the Sierras to the State of California, north of the 32d parallel, as I am fully convinced from the surveys already made that if a practicable route does not exist here there is none to be found in the State of California.

TABLE OF GRADES.

NO.	LENGTH IN FEET.	FALL PER MILE.	RISE PER MILE.	TOTAL.	MILES.
		FEET.	FEET.	FEET.	
1	3,700	30			
2	800	Level.			
3	800		25		
4	2,100	25			
5	300	Level.			
6	2,600		35		
7	3,700		10		
8	1,500		20		
9	5,500	42			
10	6,300	40			
11	5,200	35			
12	2,500	30			
13	7,500	15			
14	3,000	Level.			
15	8,000	18			
16	600	Level.			
17	1,000		40		
18	500		10		
19	2,300	30			
20	1,100		10		
21	600	10			
22	2,500	15			
23	1,500	25			
24	5,500	15			
25	1,800	Level.			
26	1,200		30		
27	1,400	Level.			
28	1,000		20		
29	1,200	Level.			
30	1,400	15			
31	3,000	3			
32	4,000	5			
33	4,000	10			
34	4,000	10			
35	3,000	10			
36	6,000	5			
37	4,000	13			
38	4,000	Level.			
39	9,000	5			
40	5,300	2			
Total.....				123,400	23,37

From the foregoing Table it will be seen that the planes of the Road may be classified as follows :

	MILES.
Grades of 5 feet per mile and under.....	6.22
“ of 10 “ “ “ “ “	4.50
“ of 20 “ “ “ “ “	6.25
“ of 30 “ “ “ “ “	2.15
“ of 40 “ “ “ “ “	3.00
“ of 42 feet per mile and under 45.....	1.25
Total Miles.....	23.37

TABLE OF CURVES AND TANGENTS.

NO.	TANGENTS—Ft.	RADIUS, 11,460	RADIUS, 5,730	R., 2,865 Ft.	R., 1910
1	200			1,825	
2	7,920		2,620		2,240
3					
4	1,500		2,040		
5	14,520	2,600			
6	87,800	To Marysville.			
Total Ft....	112,040	2,600	4,660	1,825	2,240
Total Miles	21.223	.493	.883	.846	.425
Miles.....					23.370

From the foregoing Table it will be seen that of the entire $23\frac{1}{2}$ miles $21\frac{1}{4}$ miles is tangent, and only one curve, the radius of which is less than 3 miles, the entire curvature amounting to $2\frac{147}{1000}$ miles, or less than 10 per cent.

With the above grades and alignments of your Road the distance can easily be made in 30 minutes by a 25 ton locomotive, drawing 275 tons freight.

ESTIMATES.

In estimating the cost of grading, I have based my calculations on labor being worth \$30 per month, with board—an ordinary day's labor may be estimated at 8 cubic yards moved 30 feet, which, at this standard of wages, cost 26 cents per yard cash—but for the purposes of estimate I have assumed that common excavation cost 40 cents per yard; and although the circumstances of California life make great fluctuations in the prices, not only of labor but of every other item of expenditure in Railroad construction, of quite common occurrence, yet the above estimate is confidently expected to be ample to cover all such contingencies.

In all cuts I have estimated the excavations to be 18 feet wide at road bed, with slopes of 1 foot horizontal to 1 foot vertical, and all embankments are estimated to be 14 feet wide at road bed, with slopes of $1\frac{1}{2}$ to 1. The total amount of earth to move on your Road is 167,000 cubic yards.

STRUCTURES.

The structures are so light as scarcely to require any comment. The entire amount of bridging estimated, is 260 feet of stringer or tressel bridge in 15 spans, none of which is over 25 feet. I have, therefore, recommended the adoption of stringer or tressel bridges, with timber abutments, where brick is not necessary.

From the indications at the points of crossing these streams, there will be no necessity for any masonry.

SUPERSTRUCTURE.

The superstructure I have estimated of first quality, and put down in the best possible manner, so as to guarantee a durable Road and secure a high rate of speed ; the rails to be of the best quality of American or English iron of 60 pounds to the yard, each rail of 18 feet in length, resting on 8 ties 6 by 8 inches and 8 feet long, with a cast iron chair of 12 pounds to each end thereof, secured also to each tie by two 3 inch wrought iron spikes.

EQUIPMENT.

The equipment I have estimated ample for all present business of the Road, as well as for all the increased business of the next 10 years ; the locomotives to be first class locomotives, with all modern improvements and with duplicate machinery, such as wheels and axles, etc., as can not be procured in California.

BUILDINGS.

The estimate for depots, etc., are believed to be ample for the business for the next 10 years. They are to be built of brick, and consist of depots and machine shops at Oroville and Marysville, way stations at the Prairie House and the Honcut, and wood stations and other conveniences where the same may be required for a successful operation of the Road.

RIGHT OF WAY.

It is confidently believed that the right of way will be donated outright to the Company, but for contingencies of this nature I have estimated the sum of \$25,000.

FENCING.

I have estimated to put up 46 miles of fencing, which, although not immediately necessary, yet it is deemed the best policy to fence the Road at first, so as to prevent any accident to the Company's property, as one single accident might cost more than the entire amount of fencing.

GRAVELLING.

The gravelling of your Road will be light, for nearly one-half the distance the line is laid through a gravel country, and consequently will not require to be gravelled. The use of gravel ballast for a Railroad is to keep a perfect drainage of the ties, and also in cold countries to prevent the freezing of the ground and consequent upheaving of the rails. In this State gravelling is not a matter of so much importance as in cold countries. Most of the natural surface of the east side of the Sacramento valley is quite as good without gravelling, but it is necessary in other places where drainage is not easily effected. I have for such places estimated 27,000 cubic yards as amply sufficient to secure the ties on the entire road in such places as above mentioned.

ENGINEERING CONTINGENCIES AND EXPENSES.

The Engineering expenses and contingencies I have estimated at \$80,000, to include the expenses of a corps of Engineers for 30 months, and also the expenses attached to the discharge of all the duties of the offices of the Company, negotiations of bonds and the like. And aside from the specified items of expenditure I have estimated a general contingency of \$43,000 for expenses that may arise during construction and which it is impossible to foresee.

TABLE SHOWING THE NUMBER OF ACRES OF TERRITORY TRIBUTARY TO THE CALIFORNIA NORTHERN RAILROAD, WITH A CLASSIFICATION OF IMPROVED, UNIMPROVED, MOUNTAIN AND MINERAL LANDS, WITH ASSESSED VALUE, AND ESTIMATED POPULATION:

COUNTIES.	Improv- ed acres.	Unimpro- ved acres.	Minin- g and Moun- tain acres.	Total acres.	Popula- tion.	Assessed value.
Butte.....	11,330	430,270	592,600	1,034,200	19,675	\$4,108,723
Yuba.....	63,000	39,400	166,400	268,800	21,750	5,881,582
Nevada.....	28,000	48,500	433,920	510,720	26,200	4,101,993
Sierra.....	575	46,780	375,040	422,395	19,100	2,348,229
Plumas.....	22,000	643,600	1,728,000	2,393,600	8,620	1,072,926
Siskiyou.....	100,000	1,244,000	2,368,000	3,712,000	17,525	3,980,074
Shasta.....	4,400	1,403,600	1,664,000	3,072,000	9,480	1,778,296
Trinity.....	3,210	444,790	1,079,600	1,527,600	10,490	1,403,534
Tehama.....	18,320	877,650	448,000	1,344,000	4,435	1,939,099
Total.....	250,835	5,178,920	8,855,560	14,285,315	137,325	\$25,714,456

From the above table it will be seen that the entire agricultural lands in the counties enumerated is a little over five and a quarter millions of acres, while the amount of improved lands is 250,835 acres, or about one-twentieth part of the whole.

The assessed valuation of said counties is nearly twenty-six millions of dollars, while there is within said counties 5,178,920 acres of unimproved agricultural lands, on which it is not doubted the construction of the California Northern Railroad would have, in a few years, the effect of entry and settlement, and of increasing the value of real estate in said counties to an amount which it is almost impossible to estimate.

ESTIMATES.

ITEMS.			TOTAL.
Total Excavation of Hard Pan, 50,000 cubic yards.....	\$80	\$40,000	
Total Excavation, 167,886 cubic yards.....	40	66,954	
TOTAL GRADING.....			\$106,954 00
STRUCTURES.			
200 feet of Tressel Bridge.....	\$ 60	\$12,000	
60 " of Stringer ".....	40	2,400	
30 Open Culverts, 60,000 feet B. M.....	60	3,600	
20 pairs Cattle Guards.....	250	5,000	
TOTAL STRUCTURES.....			\$23,000 00
SUPERSTRUCTURE—25 MILES.			
25 miles Iron, at 90.88-100th's tons per mile, (2272 tons).....	\$ 115	\$261,280	
14,650 Chairs, 582 per mile, 12 pounds, (88 tons).....	60c	8,790	
125,000 pounds spikes, (½ lb. each).....	\$ 10	12,500	
57,500 Cross Ties, at.....	1	57,500	
25 miles track laid.....	1,000	25,000	
Frogs, Switches and Fixtures.....		3,000	
2 miles Turn-Outs, Rails, (182 tons).....	115	15,980	
TOTAL SUPERSTRUCTION.....			\$384,000 00
EQUIPMENT.			
4 24 ton Locomotives.....	\$11,000	\$44,000	
8 60 Passenger Cars.....	3,000	24,000	
3 Baggage Express Cars.....	2,000	6,000	
10 Platform Cars.....	1,000	10,000	
10 Box Freight Cars.....	1,200	12,000	
6 sets Duplicate Wheels.....	500	3,000	
10 Gravel Cars.....	800	8,000	
4 Hand Cars.....	250	1,000	
4 Track Cars and Tools.....	300	1,200	
Putting up Machinery.....		16,000	
Freight and handling.....		15,000	
Machinery for Machine Shops.....		10,000	
TOTAL EQUIPMENT.....			\$150,200 00
BUILDINGS.			
Passenger and Freight Depot, Machine Shop, etc., at Oroville.....		\$20,000	
Passenger and Freight Depot at Marysville.....		10,000	
Way Station at Honcut.....		2,500	
Way Station at Prairie House.....		2,500	
4 Water Stations, Tanks, etc.....	\$500	2,000	
2 Turn Tables.....		6,000	
TOTAL BUILDINGS.....			\$43,000 00
Right of Way.....		\$25,000	
Fencing 46 miles, at.....	\$640	29,440	
Gravelling 27,600 cubic yards, at.....	60c	16,560	
Engineering and Contingencies.....		80,000	
			\$151,000 00
TOTAL.....			\$858,154 00

SUMMARY OF ESTIMATE.

Graduation.....	\$106,954 00	
Superstruction.....	384,000 00	
Structures.....	23,000 00	
Equipment.....	150,200 00	
Buildings.....	43,000 00	
Right of Way.....	25,000 00	
Fencing.....	29,440 00	
Gravelling.....	16,560 00	
Engineering, Office Expenses, etc.....	80,000 00	\$858,154 00
Add General Contingencies—5 per cent.....	42,917 00	
Total Expenditures.....		\$901,071 00

Making the total cost of your Road, built and running, \$901,071 00, or for 25 miles the sum of \$36,043 per mile.

The average cost of 25 roads in the State of New York, as per report of the State Engineer of 1854, is \$49,359 per mile.

The foregoing estimate of cost of construction is based on a cash value for all materials delivered at Sacramento; but as it is well known that money required to build Railroads can not be procured here in California, the cash estimates herein presented will be so much increased as to make the actual cost of the Road in its own securities probably as high as \$63,000 per mile.

In the experience of Railroad men in the construction of Railroads in this State, it is found that in order to purchase materials and procure money here, it becomes necessary to issue bonds on the roads and franchises of Railroad companies.

These bonds and securities of course vary in value according to their value in the estimation of capitalists East. It is believed, however, that the securities of your Road will be of such a nature as to offer superior inducements to capitalists and secure the construction of the Road at an early day.

BONDED DEBT.

The entire indebtedness of the Road it is anticipated will not exceed \$850,000, which will leave as assets in the hands of the Company \$650,000 of available bonds, and \$750,000 of unappropriated stock, which it is recommended shall not be subscribed for until the completion of the Road between Oroville and the Honcut creek or county line of Butte.

Your bonds will be 10 per cent. bonds, having 20 years to run, and to provide for the redemption of which I propose to set apart \$27,600 per annum as a sinking fund, to provide for their payment on maturity.

REVENUE.

The estimates of receipts are based exclusively on the business now passing over the Road, and may be safely estimated as follows:

PASSENGERS.

60 passengers each way per day, 43,800 per year, for 25 miles, at \$2.50.....	\$109,500 00
60 way passengers per day, 12 miles, 43,800, at \$1.25...	54,750 00
10 passengers per day, 10 miles, 7,300, at \$1.00.....	7,300 00

FREIGHT.

20 tons of freight each way, 14,600, at \$8.00.....	\$116,800 00
30 tons way freight each way, 21,900, at \$5.00.....	109,500 00
Mails, 25 miles.....	6,000 00
Express freights, 25 miles.....	8,000 00

\$411,850 00

WORKING EXPENSES.

The cost of operating may be estimated as follows :

Transporting 43,800 through passengers 25 miles.....	\$5,587 50
“ 43,800 way passengers 12 “	2,634 00
“ 7,300 way passengers 10 “	365 00
“ 14,000 tons through fr'gt 25 “	2,637 50
“ 21,900 tons through fr'gt 12½ “	1,968 75
Cost of repairs, maintainance, 25 m., \$500.00 per m.,....	12,500 00
“ locomotives, cars, etc., 500,000 miles run at 5 cts. per mile,.....	25,500 00
Taxes on \$300,000 office rent, etc.,.....	5,000 00
Total cost of maintainance,.....	\$56,192 75
Add interest on \$850,000 at 10 per cent.,.....	85,000 00
	\$141,192 75

Leaving a net revenue of \$270,658 for the year's operations on an expenditure of \$901,071, or about 18 per cent. per annum on a capital of \$1,500,000, or nearly 3 per cent. per month on the capital invested in cash.

The importance of this section of the Northern Road must be apparent; for, aside from controlling the trade and travel of the counties east of your Road, the business of Shasta and all the northern counties must eventually pass through Oroville. The passenger trade is at present carried through Oroville, and with a Railroad connection to Sacramento or tide-water, the freight for the northern counties would all pass this way, which is now carried up the Sacramento river to Red Bluff.

The freight business of Shasta, Yreka and the northern cities is becoming immense. From reliable data the freight discharged at Red Bluff and Tehama is not less than one thousand tons per month, costing to head of navigation \$30 per ton for heavy, and frequently \$60 for light goods. From the point of debarkation these goods are conveyed by pack animals to Yreka and all the northern country, and costing to the consumer nearly if not quite \$100 per ton. The freight business alone to this section of country amounts to not less than \$420,000 per annum.

The above facts are based upon the most reliable data that can be procured, most of which I have myself collected, and it is confidently believed that all the matters herein set forth will be fully carried out and realized; and while it is known that Railroad communication opens new avenues for enterprise and trade, and increases population and travel to a large extent, yet such anticipated increase is not drawn on in any of the foregoing tables; and in this particular instance the building of the California Northern Railroad cannot fail to produce the most favorable results, not only to the city of Oroville, but also to the entire county of Butte, in opening a market for her produce, in the

rapid increase of her population and consequent development of her resources, in localizing the entire trade of the northern counties at Oroville, in bringing her wild lands into market, and in opening a thoroughfare through the mountains to the Eastern States. These, with other equally as important results, will be the effect of the construction of the California Northern Railroad.

I may here also state that a most favorable contract for the construction of your Road has been concluded with Messrs. Chenery & Co., of San Francisco, in which it is agreed that your Road shall be built and running at the same time that the California Central Railroad shall be finished to Marysville; and that in such contract it is agreed that the total amount of the first mortgage bond or debt of the Road shall not exceed the sum of \$850,000, a little over one-half the capital stock of your Road, while other roads that have been and are being constructed in the State have issued bonds for the full amount of their capital stock. From this fact alone it will be seen that at the time of the entire completion of your Road, your stock will be classed as the best Railroad stock in market, and ought to be worth par as a permanent investment.

All of which is respectfully submitted.

WM. S. WATSON,
Chief Engineer and Commissioner
of the Cal. Northern R. R.

OROVILLE, July 30th, 1859.

California Northern Railroad.

Principal Office: Myers Street, Oroville, Butte Co., Cal.

Capital Stock, \$1,500,000.

Officers:

DR. T. J. JENKINS, PRESIDENT;
GEO. A. EMERY, TREASURER;
D. D. HARRIS, SECRETARY;
WM. S. WATSON, CHIEF ENGINEER AND COMMISSIONER;
RICHARD CHENERY & CO., CONTRACTORS, S. F.

Directors:

T. J. JENKINS, ...	Oroville;
H. B. LATHROP, SR., ...	"
JNO. UPSTONE, ...	"
GEO. A. EMERY, ...	"
P. S. GARLOW, ...	"

3

RAILROAD COMMUNICATION WITH THE PACIFIC,

WITH AN ACCOUNT OF THE

CENTRAL PACIFIC RAILROAD

OF

CALIFORNIA:

THE CHARACTER OF THE WORK, ITS PROGRESS, RESOURCES,
EARNINGS AND FUTURE PROSPECTS, AND THE
ADVANTAGES OF ITS

FIRST MORTGAGE BONDS.

—♦♦—
NEW YORK, OCTOBER, 1867.
—♦♦—

New York:

GEORGE BROWN, PRINTER, 30 FRANKFORT STREET.

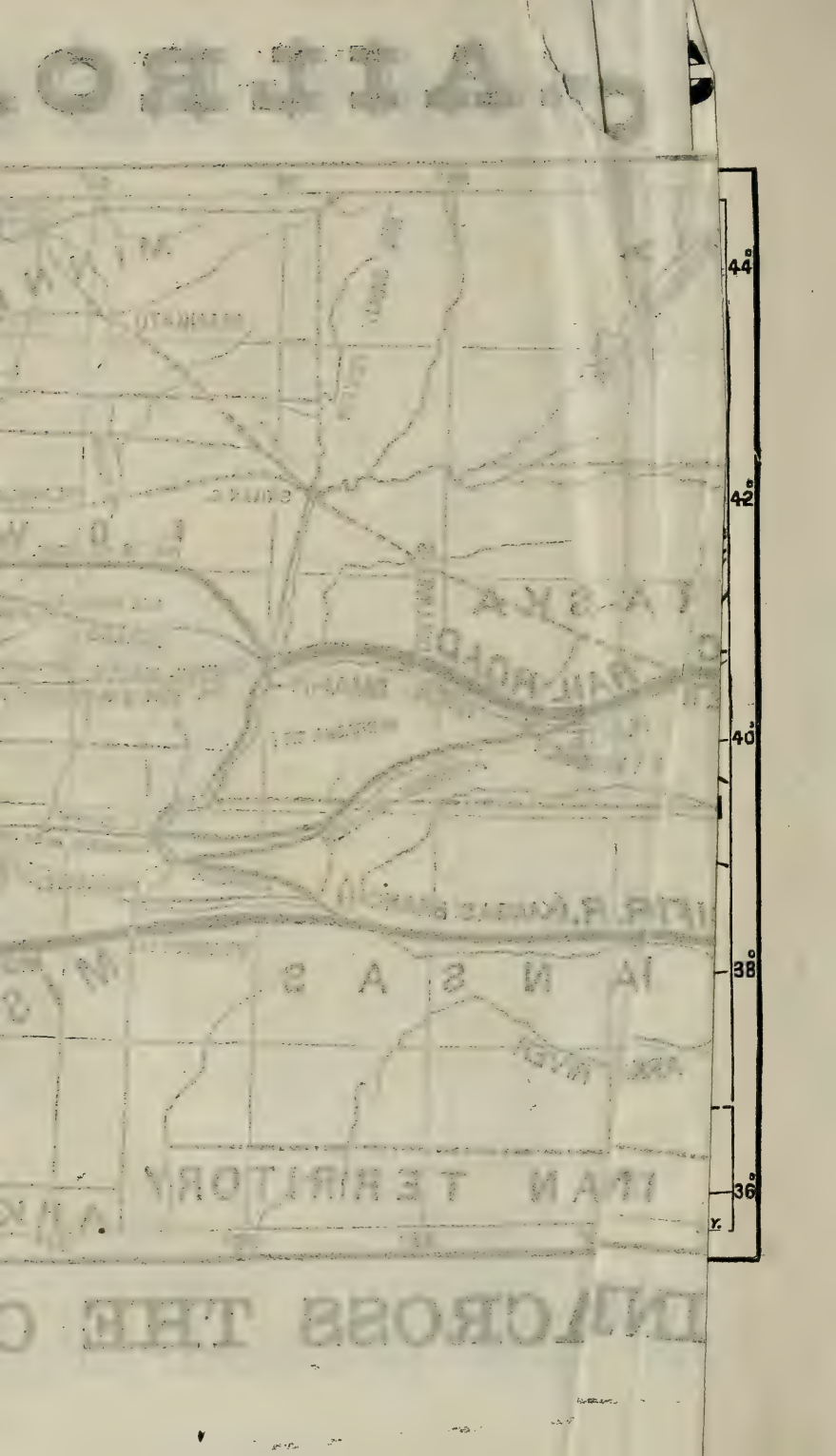
1867.

CALIFORNIA STATE LIBRARY

CENTRAL PACIFIC RAILROAD.



The principal portion of the MAIN STEM LINE ACROSS THE CONTINENT.



Railroad Communication with the Pacific,

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1867.

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SACRAMENTO, CAL.

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NEW YORK CITY.

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Bankers, FISK & HATCH, New York.

CALIFORNIA OFFICE,
56 and 58 K Street, Sacramento City, Cal.
NEW YORK OFFICE,
54 William Street, New York City.

RAILROAD COMMUNICATION

WITH THE PACIFIC.

CENTRAL PACIFIC RAILROAD.

THE GREAT NATIONAL PACIFIC RAILROAD LINE, which is being constructed, with the aid and under the supervision of the United States Government, between the Mississippi Valley and the Pacific Ocean, forming with its existing eastern connections a continuous line across the continent, is destined to become one of the most important channels of trade and communication in the world. With its western terminus at San Francisco, the most commodious harbor on the North Pacific Coast, and its branches reaching the railroad systems of the Atlantic States by way of Chicago and Saint Louis, it constitutes, as it were, the Grand Trunk line of this hemisphere. It lies directly in the path of the great westward movement of population and trade, along the temperate belt across this country, and becomes an essential link in the mighty inter-continental traffic between Western Europe and Eastern Asia. It presents the shortest and most practicable route to the Pacific, and must serve four-fifths of all the population west of the Missouri river. It has a dense and productive group of States at one end of the line, and an energetic coast population at the other, with a rich mining country intermediate. Already centres of population dot its length from Omaha to San Francisco,

and it seems certain that a chain of great cities must grow up in its path, swelling the volume of trade and travel to dimensions which baffle all present estimate.

Need of a Railroad to the Pacific.

The necessity for railroad communication with the Pacific has been felt ever since the gold discoveries drew thither large numbers of active people. The yield of bullion has steadily increased, and gives signs of still greater expansion when increased facility of communication will have rendered mining industry more stable and profitable. Thus far only the richest veins could be worked at a profit, by reason of the very costly freights upon all the machinery and subsistence used in extracting the ores. Hereafter many mines will be put within the limit of profitable working; while the Asiatic market for precious metals is inappeasable.

The United States Commissioner of Mining Statistics gives the following estimate of the yield of precious metals from the Pacific States and territories :

1861, ...	\$43,391,000	1864, ...	\$63,450,000
1862, ...	49,370,000	1865, ...	70,000,000
1863, ...	52,500,000	1866, ...	100,000,000

For the past year the product is estimated to be distributed thus :

California, ...	\$25,000,000	Idaho, ...	\$17,000,000
Oregon and Washington, ...	8,000,000	Nevada, ...	16,000,000
Montana, ...	18,000,000	Colorado, Utah, &c.....	17,000,000

In eighteen years, the Pacific States have contributed no less than a thousand millions of gold and silver to the store of the world's treasure, and the annual yield is now reckoned at upwards of a hundred millions. This is a constant and immense addition to our material wealth—one of our greatest national resources. Already Oregon and California are sending us also the produce of their fields, vineyards and fisheries, and give indications of supporting an immense population.

Material and Social Benefits.

Beside an unprecedented export of bullion during the same period, there were shipped from San Francisco to New York and Great Britain, from the surplus of last year's harvest, between July 1 and April 27, as follows :

Wheat in sacks, 4,336,387 lbs.

Flour in bbls., 400,000.

The year's crop was estimated at 12,000,000 bushels, and the crop of 1867 is said to be even greater, and large portions of the great interior basin have drawn their supplies from the States of California and Oregon, aside from the above quantity exported.

West of the Missouri boundary lies a vast expanse of country, rich in soil and minerals, as yet hardly explored. With one half of the territory, it has less than a twentieth of the population of the country. California alone, with a population of ten millions, would be no more crowded than New York State is with four millions, and the capacity of the half million square miles beyond the Missouri to support a population of two hundred millions can hardly be doubted. The half million of people in California would speedily jump to five millions upon the establishment of railroad communication ; and the value of all property interests, both there and in the intermediate territories, would be largely enhanced. A railroad is the one thing wanting to shower a general blessing on the Far West.

These gratifying results, together with the prospect of a vast trade between San Francisco, China, Japan, the East India Islands, British Columbia, the Sandwich Islands, the Central and South American ports, the newly acquired Russian America, have added to the original demand for a safe, speedy and short transit to the Pacific. The best route between London and Hong Kong will hereafter lie across the American Continent, thereby avoiding the perils of the Red Sea, or the long journey through the Southern Ocean. There is a manifest disability in the American people sending their passengers, mails, freights (and soldiers even), across a tropical foreign isthmus, or 15,000 miles round the Capes,

when they might have a good and easy road through their own territory. Independently, therefore, of the great material development which must follow the construction of a railroad to the Pacific, the people demanded it because it would be an additional bond of union to its distant parts, make its people more homogeneous, and enable the Government to preserve order and concord throughout its Western domain.

The people on the Pacific coast are drawn from the East, and are still bound by the strongest ties to the Atlantic States. It is not alone the key which is to unlock the mountain stores of treasure, but also to open wide the gates of trade and comfort—the way to home and relatives. It is to bring them within from four to six days of the places they knew in their youth. It is to banish a twenty-two days' ocean voyage, with its Isthmus fevers and its shipboard discomforts, and to mark a period of deliverance to the people of the Pacific coast, who are practically further away from us now than are the people of interior Europe.

The aid of the Government was, therefore, properly invoked to put the scheme within the compass of corporate enterprise.

Legislative Action on the Scheme.

The idea of a railroad to the Pacific has been a favorite theme for speculation for years, and had been urged upon the attention of the government by commercial and political conventions at intervals since 1845.

The first practical step towards building a railroad across the Continent was the introduction of a bill into the United States Senate by Colonel Benton, in February, 1848, providing for the location and construction of a Central National Road from the Mississippi River to the Pacific Ocean—to be an iron railway where practicable—and providing for the application of the larger portion of the proceeds of sales of public lands to defray the expense. The terms of the proposal show that a very inadequate idea of the future greatness of the Far West was then entertained; but even this

project received no active support. At that time there were no railroads west of the Mississippi—none, in fact, had reached it from the East—and the Erie Railroad was not completed. In 1850, under the patronage of the State of Missouri, a company was organized, and a railroad projected from St. Louis along the south bank of the Missouri to the western boundary of the State. In 1860, the outbreak of the war found it halted at Sedalia, about sixty-five miles from the Kansas line.

About the same time, three several roads were projected across Iowa to connect the Mississippi with the Missouri. One of these has since reached Omaha (and another is nearly completed,) which establishes a continuous line of railroad from the Atlantic nearly to the base of the Rocky Mountains, about 1,700 miles.

Upon the discovery of rich gold and silver mines in the celebrated Washoe Region, on the eastern side of the Sierra Nevada Range, in 1859 and 1860, by which population and capital were rapidly drawn from California, certain enterprising merchants on the Pacific Coast, foreseeing that an extensive trade must spring up between San Francisco and the interior, which must eventually be extended across the Continent, combined to ascertain if it were feasible to build a railroad across this formidable barrier of snow-crowned mountains. After two years of exploration, in which several surveys were made, the Donner Lake Pass was selected as the most favorable route to be found within hundreds of miles; and in July, 1861, THE CENTRAL PACIFIC RAILROAD COMPANY OF CALIFORNIA was organized, under the laws of that State, with authority to construct a railroad to its eastern boundary, so as to form part of the projected line to the Atlantic States.

The Pacific Railroad Act of Congress.

Such was the demand for a through line of railroad to the Pacific, and such its importance for commercial, industrial and national purposes, that in July, 1862, Congress, under

the Pacific Railroad Act, authorized the construction of a continuous line of railroad and telegraph from the Missouri River to the Pacific Ocean.

The general purpose of the act was to provide for a continuous line of railroad between San Francisco and the 100th meridian, and from that point five diverging radial lines were to connect with Omaha, Sioux City, Atchison, Leavenworth, and Wyandotte respectively, and through them with the roads built or projected to the Mississippi. The main stem was to be built by either of the companies which should first reach the 100th meridian from the East, together with the Central Pacific, building from the Western end.

A new organization—the UNION PACIFIC RAILROAD COMPANY—was formed to build the Eastern portion; and the CENTRAL PACIFIC RAILROAD COMPANY OF CALIFORNIA was recognized and authorized to receive the Government aid for the Western portion. These two corporations were required to extend their lines from opposite ends until a through connection should be formed.

The law provides that each of these two principal corporations shall have the right to continue onward till met by the other; so that in case of failure or inefficiency of either company, the other should have the privilege of completing the work. The language of the Act is as follows, after authorizing the Union Pacific to build to the California boundary in case it was not sooner met by the Central Pacific Railroad (Section 10, Act of 1862):

“And the Central Pacific Railroad Company of California, after completing the road across said State, is authorized to continue the construction of said railroad and telegraph through the Territories of the United States to the Missouri River, including the branch roads specified in this act, upon the routes hereinbefore and hereinafter indicated, on the terms and conditions provided in this Act in relation to the said Union Pacific Railroad Company, until said road shall meet and connect, and the whole line of said railroad and branches and telegraph is completed.”

And again in the amendment (July 3, 1866), it is further enacted :

"That the Union Pacific Railroad Company, with the consent and approval of the Secretary of the Interior, are hereby authorized to locate, construct, and continue their road from Omaha, in Nebraska Territory, westward, according to the best and most practicable route, and without reference to the initial point on the one hundredth meridian of west longitude, as now provided by law, in a continuous completed line, until they shall meet and connect with the Central Pacific Railroad Company, of California; and the Central Pacific Railroad Company of California, with the consent and approval of the Secretary of the Interior, are hereby authorized to locate, construct, and continue their road eastward, in a continuous completed line, until they shall meet and connect with the Union Pacific Railroad, *Provided*, That each of the above-named companies shall have the right, when the nature of the work to be done, by reason of deep cuts and tunnels, shall for the expeditious construction of the Pacific Railroad require it, to work for an extent of not to exceed three hundred miles in advance of their continuous completed lines."

The United States Government Aid.

In order to facilitate such a gigantic enterprise, Congress, after granting the right of way, *authorized an issue of the bonds of the Government, proportioned to the length and difficulty of the work under construction, amounting in the aggregate to about half the estimated cost of building*; beside alternate sections of public lands lying contiguous to the route. The companies embraced in the Act have an absolute gift of ten alternate sections (12,800 acres) per mile, on each side of the line, of the public lands, and the privilege of using timber, coal, iron, &c., from the territories through which they pass. They are also entitled to receive, upon the completion of continuous sections of twenty miles, the Bonds of the United States Government in the following proportions: between the Missouri River and the east base of the Rocky Mountains, about 650 miles, \$16,000 per mile; across the Rocky Mountains (150 miles), \$48,000 per mile; thence across the Great Basin (900 miles), \$32,000 per mile; across the Sierra Nevada Mountains (150 miles), \$48,000 per mile, and thence to San Francisco (about 120 miles), \$16,000 per mile. The words of the Act are as follows (Section II.):

"That for three hundred miles of said road most mountainous and difficult of construction, to wit: one hundred and fifty miles westwardly from the eastern base of the Rocky Mountains, and one hundred and fifty miles eastwardly from the western base of the Sierra Nevada mountains, said point to be fixed by the President of the United States, the bonds to be issued to aid in the construction thereof shall be *treble* the number per mile hereinbefore provided, and the same shall be issued, and the lands herein granted be set apart, upon the construction of every twenty miles thereof, upon the certificate of the commissioners as aforesaid that twenty consecutive miles of the same are completed; and between the sections last named of one hundred and fifty miles each, the bonds to be issued to aid in the construction thereof shall be *double* the number per mile first mentioned, and the same shall be issued, and the lands herein granted be set apart, upon the construction of every twenty miles thereof, upon the certificate of the commissioners as aforesaid that twenty consecutive miles of the same are completed."

Upon portions where, by reason of natural obstacles, the road cannot be continuously completed, but where the work is mostly done, provision is made for an issue of two thirds these amounts in advance. It is also provided that the several Companies shall transport the Government mails, messages, troops, supplies, etc., at their regular rates; half the compensation to be paid in cash, and the balance applied to canceling the Government advances.

Roads Receiving the Government Subsidy.

No little confusion prevails in the public mind concerning the several lines of railway proposed or projected, which are to connect the Pacific with the existing network of communications, all of which, with more or less of distinction, are styled "Pacific Railroads." This confusion is further increased by the fact that various local and State railroad organizations have incorporated into their titles the term "Pacific."

The Companies embraced in the Pacific Railroad Act, and entitled to participate in the grants of Government aid for the construction of the National Trunk Line and branches, are enumerated by the Secretary of the Treasury in a tabular Exhibit of the names of the different roads, the distances to be built under Government patronage, and the amount of bonds to be issued to each as follows:

NAME OF ROAD.	Distance in Miles.	Amount per Mile.	Total Amount of Bonds to be Issued.
CENTRAL PACIFIC RAILROAD—			
From Sacramento to the western base of the Sierra Nevada Mountains.....	7.18	\$16,000	\$114,880
Thence, 150 miles across the Sierra Nevada Mountains	150	48,000	7,200,000
Thence, to the probable junction with the Union Pacific, or to a point $78\frac{295}{1000}$ miles east of Salt Lake City, [forming the sole link between the interior and the navig- able waters of the Pacific].....	$544\frac{115}{1000}$	32,000	17,411,680
Total.....	$701\frac{295}{1000}$		24,726,560
UNION PACIFIC RAILROAD—			
From Omaha to eastern base of Rocky Mountains, about	516	16,000	8,256,000
Thence, 150 miles across the Rocky Moun- tains.....	150	48,000	7,200,000
Thence, to the probable junction with the Central Pacific, or to a point $78\frac{295}{1000}$ miles east of Salt Lake City, estimated	$289\frac{705}{1000}$	32,000	9,270,560
Total.....	$955\frac{705}{1000}$		24,726,560
UNION PACIFIC RAILWAY, EAST- ERN DIVISION (KANSAS BRANCH)—			
For a length equal to the distance from the mouth of Kansas River, <i>via</i> the Kansas and Republican Rivers, to 100th meridian—(is allowed to connect east of the Rocky Mountains, about 700 miles), entitled to bonds for.....	381	16,000	6,096,000
ATCHISON & PIKE'S PEAK RAIL- ROAD—now called CENTRAL BRANCH OF UNION PACIFIC—			
100 miles next to the Missouri river.....	100	16,000	1,600,000
SIOUX CITY AND PACIFIC RAIL- ROAD—			
From Sioux City to its junction with the Union Pacific Railroad at Fremont....	100	16,000	1,600,000
WESTERN PACIFIC RAILROAD—			
From San José to Sacramento.....	120	16,000	1,920,000

The charter of the last-named Company contemplated a line from Sacramento toward San Francisco, making the circuit of the Bay of that name. Their franchise has recently been assigned to parties in the interest of the Central Pacific Railroad Company; and it is probable that this line will be incorporated with the Central Pacific Railroad, and the road extended from Sacramento to San Francisco by the

shortest, most direct and practicable route so soon as the overland connection is completed. In the meantime the travel is abundantly accommodated by first-class steamers.

Since the action of Congress, several other railroad organizations, both in California and in the Western States, have adopted, in various forms, the title of Pacific Railroad, which have no claim upon the Congressional appropriations of the national credit.

The National Trunk Line.

THE GREAT NATIONAL PACIFIC RAILROAD, adopted and fostered by the Government, is being constructed mainly by the CENTRAL PACIFIC RAILROAD COMPANY and the UNION PACIFIC RAILROAD COMPANY, *the former having in hand the Western portion, and the latter the Eastern portion of the Main Trunk line*, as prescribed by the Acts of Congress, approved July 1, 1862, and Amendments approved July 2, 1864, and March 3d, 1866. The other Pacific Railroads, so-called, except those named in the foregoing schedule, have no identity with the GREAT NATIONAL ROUTE, *and should not be confounded with it, as this is the only line being constructed under the supervision and patronage of the Government, and receiving the grants of Bonds, as well as land, for the purpose.*

THE UNION PACIFIC RAILROAD, commencing at Omaha, on the Missouri river, has already extended its road across the plains of Nebraska to the vicinity of the Colorado boundary, and it is confidently believed, will reach the eastern base of the Rocky Mountains, 517 miles from the Missouri, by Autumn next. Although the company has shown great energy in carrying its track over a favorable country, its progress over the three successive ranges of mountains which form the Rocky Mountain chain, must necessarily be more difficult, costly and tedious.

THE UNION PACIFIC, Eastern Division (Kansas branch), which is to unite with the main stem at the foot of the Rocky Mountains, is also pushing rapidly forward, having reached Fort Harker, a point 235 miles west of the Missouri boundary, and five hundred miles west of St. Louis, by a

continuous line. It is expected this line will reach Denver, Colorado, in 1868.

The meeting-point of the two powerful companies building the main line has not yet been officially determined, though it is understood by the government officials and by the officers of the respective companies that it will be somewhere east of Salt Lake. The Secretary of the Interior, by whom these roads are finally located and accepted on the part of the United States, in his response to the resolution of inquiry of the House of Representatives, requesting information of the amount of Bonds to be issued to the several companies, dated Feb. 14th, 1867, says:

“Since the locations of the different roads have not been definitely determined throughout their whole extent, the above estimate must be regarded only as near an approximation as it is possible at the present date to furnish. The point of junction of the Union Pacific and Central Pacific has been assumed to be $78\frac{295}{1000}$ miles east of Salt Lake City, or at a point which will entitle each of these companies to the same amount of bonds.”

He estimates the distance to be built by the Union Pacific Company at 955 miles, and the amount of bonds to be issued therefor, at \$24,726,560. Surveys by the Central Pacific Company, since completed, establish the shortest and most favorable line between Sacramento and the meridian of Salt Lake at 726 miles, which would give as the amount of Bonds to be issued to that company on the completion of that length, \$25,520,000.

Central Pacific Railroad Company—Organization, Franchises, &c.

The Central Pacific Railroad Company of California was organized in July, 1861, under the general railroad law of that State, with authority to build a railroad from the navigable waters of the Pacific at Sacramento to the eastern boundary of the State.

By the 9th Section of the Act of Congress, the Company was required to file its acceptance of its provisions, and assume the obligations therein imposed, within six months after its passage, which acceptance was filed on the third day of December, 1862.

The Company enjoys the fullest authority and sanction of the State of California, in addition to the grants and franchises of Congress, as may be seen from the subjoined extract from "An Act to aid in carrying out the provisions of "The Pacific Railroad and Telegraph Act of Congress," approved April 4th, 1864 (Chap. ccccxvi., Statutes, 1863-4):

"Section 1st. Whereas, by the provisions of an Act of Congress, entitled an Act to aid in the construction of a railroad and telegraph line from the Missouri river to the Pacific Ocean, and to secure to the Government the use of the same for postal, military, and other purposes, approved July first, eighteen hundred and sixty-two, the Central Pacific Railroad Company of California is authorized to construct a railroad and telegraph line in the State of California, and in the Territories lying east of said State, towards the Missouri River; therefore, to enable the said Company more fully and completely to comply with and perform the provisions and conditions of said Act of Congress, the said Company, their successors and assigns, are hereby authorized and empowered, and the right, power, and privilege is hereby granted to, conferred upon and vested in them to construct, maintain, and operate the said railroad and telegraph line, not only in the State of California, but also in the said Territories lying east of and between said State and the Missouri River, with such branches and extensions of said railroad and telegraph line, or either of them, as said Company may deem necessary or proper; and also the right of way for said railroad and telegraph line over any lands belonging to this State, and on, over, and along any streets, roads, highways, rivers, streams, water, and water-courses, but the same to be so constructed as not to obstruct or destroy the passage or navigation of the same; and also the right to condemn and appropriate to the use of said Company such private property, rights, privileges, and franchises, as may be proper, necessary, or convenient for the purposes of said railroad and telegraph, the compensation therefor to be ascertained and paid under and by special proceedings, as prescribed in the act providing for the incorporation of railroad companies, approved May twentieth, eighteen hundred and sixty-one, and the Acts supplementary and amendatory thereof; said Company to be subject to all the laws of this State concerning railroad and telegraph lines, except that messages and property of the United States, of this State, and of the said Company, shall have priority of transportation and transmission over said line of railroad and telegraph; hereby confirming to and vesting in said Company all the rights, privileges, franchises, power, and authority conferred upon, granted to, or vested in said Company by said Act of Congress; hereby repealing all laws and parts of laws inconsistent or in conflict with the provision of this Act, or the rights and privileges herein granted.

"Sec. 2. This Act shall take effect and be in force from and after its passage."

Similar legislative authority is granted by Nevada.

Progress and Character of the Railroad.

This road commences at the City of Sacramento, in the State of California, and extends in an easterly direction across the State to the eastern boundary thereof (about 150 miles), thence across the richest portions of Nevada and Utah, to the vicinity of Salt Lake City, where it will connect with the roads building from the Missouri.

The Company commenced the work of constructing the road in February, 1863, and in May, 1864, had twenty-two miles in operation, and thirty-one in July of that year. The undertaking has been carried over all obstacles with steady persistence, sixty-six miles of the hardest portion being built in three years. In November last ninety-four miles were in actual earning operation, to within eleven miles of the summit of the Sierra Nevadas, overcoming a rise of nearly 6,000 feet; and a large portion of the grading had been done upon the fifty miles next following—all embraced in the mountain crossing, the whole being equal to 500 miles of ordinary railroad.

The portion of road between Colfax and Alta was the most expensive part of the whole line between Sacramento and the eastern boundary of the State. The present terminus at Cisco, ninety-four miles from Sacramento, is a point where the Company controls the entire business crossing the Sierra Nevadas.

The following table will show the rate of progress and the elevation above the sea level:

	Miles.	Feet.
January, 1, 1865, to New Castle,.....	31 ..	930
May 13, 1865, to Auburn,.....	36 ..	...
June 10, 1865, to Clipper Gap,.....	42 ..	1,600
September 4, 1865, to Colfax,.....	56 ..	2,443
May 8, 1866, to Secret Town,.....	66 ..	3,415
July 10, 1866, to Alta,.....	73 ..	3,625
November 29, 1866, to Cisco,.....	94 ..	5,911
September, 1867, to Summit,.....	105 ..	7,042
November, 1867, to Virginia Station, estimated,..	150 ..	5,800
July, 1868, to Humboldt, estimated,.....	250 ..	4,500
December, 1869, to Humboldt Wells, estimated,..	507 ..	5,615
July, 1870, to Weber River (Salt Lake City), ...	726 ..	4,285
December, 1870, to Fort Bridger,.....	800 ..	6,261

The road, so far as completed, has been examined and accepted as entirely satisfactory by the United States Commissioners, and the bonds of the United States have been issued thereon. It will compare favorably with any railroad in the United States. The law requires that the road shall be substantially built of the best American materials, and in such a way as befits its semi-national character. The rails are of the best quality of American iron, weighing at least sixty pounds per yard, and laid with wrought-iron splice plates, except a few miles, where wrought-iron chairs are used. The cross-ties, numbering 2,400 per mile, are 6x8 and 10 inches, and 8 feet long, of red wood and tamarack, which is quite equal to red cedar or locust for durability.

The culverts are all of granite, or other hard rock, except a few of hard-burnt brick in the valley, where stone could not be procured. The bridges are made of the best quality of Puget's Sound timber, with foundations of masonry. The drainage is ample and complete, and the road-bed is well ballasted with gravel or broken stone. The alignment is remarkable for its directness in such a broken, mountainous country.

The grades are necessarily high, to surmount the summit, 7,000 feet above the level of the sea, which elevation is attained without any undulating grades, the rise being constant from the foot-hills on the west side of the Sierras to the summit thereof, thence descending eastwardly to the Truckee River, without loss of elevation or depression.

The highest grade is 116 feet per mile, of which there will be but three and a half miles on the whole line, the average rate being 75 feet to the mile for the Mountain Division. The bulk of the heavy grade is at 105 feet to the mile, with numerous level intervals interspersed. Thirty per cent. only of the distance is occupied by curves, none of which have a radius of less than 573 feet, or 10 degrees. The Baltimore and Ohio Railroad has 17 miles, in two stretches, of 116 feet grade, with curves of 400 feet radius; and the Virginia Central, for many years worked with the

unaided locomotive, grades of 296 feet to the mile, and ruling curves whose radii were 300 feet.

A peculiarity of this route is the fact that the engineers have taken advantage of a bold spur or projecting ridge, an offshoot from the main chain of mountains, which extends nearly to Sacramento. By following this ridge all the way up to the sources of the South Yuba, an excellent natural grade is obtained, broken by but few ravines, and with uniform and continuous ascent. Such another path across the mountains is not to be met with for hundreds of miles up and down the range; as in all the passes in use by wagons, the mountain side is too precipitous to be available for railroad purposes.

From the valley of the South Yuba across to the Truckee River, the "deep snow" line of thirty-five miles is met. For the greater portion of this distance, the road follows what is called a "side-hill" line, and for the most part is so sheltered as to be available in winter. Between causeway, embankment and tunnel, the route across the summit will be but little affected by deep snows. At troublesome spots along nine miles of the highest portion a substantial over-hanging shed will be constructed, so as to shoot the snow clear of the track. The road has been made available for passenger-trains to run at twenty-five miles an hour, and freight-trains at half that speed.

Crossing the Sierra Nevadas.

The chief difficulties apprehended in the construction of the great railroad to the Pacific, high mountain crossings and winter snow obstructions, prove, upon practical test, to be not at all formidable. The mountain ranges have to be crossed at elevations of over 7,000 feet, or more than twice the height of any railroad lines built on this continent. Experience shows that it is entirely practicable, and that the deep snows are not likely to prove a very serious obstacle. In November last this Company had carried its track nearly

to the summit, and had demonstrated the feasibility of the whole mountain passage with less average engineering resistance than is met in crossing the Alleghanies, thus disposing of one of the twin fears. During an unusually severe winter it has successfully operated the road as far as built, and could have done so over the mountains with equal ease. It had large working parties on the Summit Pass, so as to convince its officers that the other fear of impassable snow-drifts is equally needless. Only six days have the trains failed to make the regular trips from snow, which is far less interruption than has attended many of the Atlantic lines.

From Cisco to the Summit, most of the heavy rock cutting is now done. The crest of the ridge is pierced by a tunnel of 1,658 feet, the longest on the road, which was opened on the 29th of August. In the meantime a large force is being concentrated upon the line on the eastern slope. About twenty-five miles of this portion are now graded. A locomotive has been hauled across and set up on this portion, and in a few days the two links will be united, and the mountain crossing completed. It is an important feature to note that the grading and preparation of the road-bed on the 150 miles now about completed are greater than for the 650 miles across the Salt Lake Basin. It may fairly be assumed, therefore, that with the completion of this mountain section nearly half of the whole work and outlay has been accomplished.

East of the summit the descent is much easier, the great interior basin being elevated between 4,000 and 5,000 feet above the sea level. In fourteen miles there is a fall of 1,100 feet, after which there is a gentle slope, nowhere exceeding forty-five feet to the mile, eastward toward Salt Lake. There are, including the Summit Tunnel, fifteen tunnels (in all 6,262 feet) on the portion now grading, all of which have been cut out. Portions of this line have cost upward of \$200,000 per mile to grade. Provision is made in the larger tunnels and heavy cuttings for a double track, which, from present indications, will be necessary at no distant day to accommo-

date the growing traffic. Ten thousand men, mostly Chinese laborers, and 1,300 teams are employed on the work, and it is confidently believed that in January next the locomotive will be traversing the plains of Nevada.

Cost of Construction and Equipment.

The estimated cost of a single continuous line from the Missouri to the Pacific coast, 1,800 miles, was a hundred millions. Half of this sum (\$49,353,160) was by Congress appropriated from the national credit for the purpose, to be divided equally between the two principal companies, the Union Pacific at this end, and the Central Pacific at the other. Ten millions more were devoted to the smaller branches in Kansas.

Referring to the financial burden of so stupendous a work the Company's last Report says :

"The original estimated cost of building the road across the Sierras was but slightly above that of the most expensive railroads in the country where the right of way had to be purchased at considerable cost. Up to the 1st of January last the Central Pacific Company had expended in building the ninety-four miles in operation, together with about a third of the preparation upon twenty-five miles additional, and for a liberal equipment of rolling stock, nearly \$15,000,000 (\$14,558,714). Fifty-three miles additional, or about one hundred and fifty in all, will, it is confidently expected, be running by October next, which brings the road to the comparatively smooth ground. The total construction cost of this mountain section will be about \$15,000,000, or at the rate of \$100,000 per mile. The rest of the distance to Salt Lake City, five hundred and seventy-five miles, can be constructed for about \$60,000 per mile. The difference in the prices of labor and iron, sufficiently accounts for the increase upon the original estimate. About \$5,000,000 more will have been expended by midsummer for labor, rails, and equipments, most of which is either on the other side or *en route*. The bulk of the engineering difficulties, it will be observed, has already been overcome; and by far the most costly and rugged resistance left behind. Rails are already being laid east of the summit, ready for the advance when the tunnel is opened."

The Company have encountered, at the commencement of their efforts, the most difficult and expensive part of their work, and the success and rapidity with which it has been accomplished, and the financial results already exhibited in the earnings of the completed portion of the road, demon-

strate the feasibility of the route, and the profitable character of the enterprise, beyond all question. Rails and materials have been bought and shipped for 160 miles in addition to the mountain section. The Company have on hand fifty-one locomotives, and a very liberal equipment for 300 miles of road.

Surveys and Estimates for the Extension to Salt Lake.

The general route of the road after leaving the Big Bend of the Truckee River is northeastwardly to the Sink of the Humboldt River, which stream it follows for upwards of 250 miles, through a fertile valley, abounding in wood and water, to Humboldt Wells, 507 miles distant from Sacramento; to this point the route has been officially designated by the Secretary of the Interior. From Humboldt Wells the country has been thoroughly explored to Salt Lake City, in all directions. Two practicable lines were found, one running round the south end of Salt Lake, and the other skirting the north end. The former, however, passes through a rough and desert country destitute of wood and water, and involves, besides a longer distance, the necessity of crossing the famous Mud Flats of the Great Salt Lake Desert, which would require piling for 25 miles. The more northerly route proved to be very favorable in alignment and grades, and with plenty of wood and water, both for fuel and construction. More than half the distance can be built with grades varying from 0 to 25 feet per mile, while none of them exceed 75 feet per mile, for short distances.

The following Comparative table from the Report of the Chief Engineer will show the grades and distances of the two lines; the terminal points in both cases being Humboldt Wells, and Weber Canyon, a rocky defile through the Wasatch Mountains on the border of Salt Lake, and the natural approach to that city from the eastward. It will be seen that the north line is 84 miles shorter, with a difference of 218 feet rise and fall in its favor.

<i>ROUTE.</i>	<i>Distance in Miles.</i>	<i>Total Rise of Grades.</i>	<i>Total Fall of Grades.</i>	<i>Total Rise and Fall.</i>
North Line, <i>via</i> Pequop Pass.....	219	1,969	3,024	4,993
South Line, <i>via</i> Great Salt Lake Desert.....	303	2,032	3,179	5,211

The line, as surveyed from the Eastern Base of the Sierras to Salt Lake, gives such a favorable location that it is confidently believed the remainder of the line can be built on such easy terms as to keep the Company's interest liabilities down to the ratio of the first 150 miles, or less than two and a half per cent. upon the total cost. The assistance from the national government for this distance is \$32,000 per mile; while a great proportion of the distance can be built for \$50,000 per mile, as the variation from the mean level does not exceed five feet per mile, for continuous stretches of a hundred miles, and in no place exceeds seventy feet per mile for short distances.

This will give the Company a Great Trunk Line across the Continent, following the isothermal belt, nearly 800 miles in length, at a cost for construction and equipment of less than sixty millions of dollars; but worth in earning power a very much greater sum, as the peculiarity of its location forbids anything like advantageous competition.

The Company hopes to increase its force of ten thousand men to fifteen thousand during the present season, when progress over the plains will be very rapid.

In its outlays, it is worthy to be noted, that this Company are fortunate in being able to command large numbers of cheap, serviceable Chinese laborers; and also in the fact that the iron and heavy freights can be shipped round the Horn at less cost than it would take to send them to the Missouri.

Construction Resources.

For the first seven miles the Central Pacific receives the same Government subsidy as the roads east of the Rocky Mountains, \$16,000 per mile; for the next 150 miles of more rugged country it receives \$48,000 per mile, and for the

remaining distance (more than 600 miles) \$32,000 per mile. The people of California have shown themselves so profoundly interested in the success of the road that the State and Municipal corporations have added to the resources of the Company. The State of California has assumed the payment of the interest for twenty years upon one million and a half of the Company's bonds; a concession worth about \$3,000,000 in gold. In addition to the subsidy granted this Company by the General Government, the City of San Francisco has donated, to aid in the construction of the road, four hundred thousand dollars, in city seven per cent. thirty year gold paying bonds; and the City of Sacramento has donated some thirty acres of land in that city, embracing about 1,300 feet of valuable water front on the Sacramento River, which, with the privileges connected therewith, is considered worth three hundred thousand dollars; and the Company have also received from stock subscriptions about \$4,000,000, mostly in gold.

The following is a Schedule of the Company's Resources, upon the Mountain Division (about 150 miles), showing the proportion bearing no interest, and that for which the Company is liable :

CONSTRUCTION RESOURCES.	Value.	Interest Liabilities of Company.
Subscriptions to Capital Stock,.....	\$4,000,000	
Net earnings, after interest payments, 1865 (gold),	178,161	
" " " 1866 "	530,503	
" " " 1867 "		
estimated on basis of previous year.....	1,050,840	
Donation City San Francisco, 30 years' bonds...	400,000	
" " Sacramento, 30 acres, including		
valuable water front, for depots, wharves,		
shops, &c.....	300,000	
U. S. public lands along the line 2,000,000 acres,		
mostly in valuable timber, minimum valuation	3,000,000	
U. S. Government Bonds 6 per cent.; interest paid		
by U. S.....	7,336,000	
State Aid Bonds; interest paid by California....	1,500,000	
Central Pacific Convertible Bonds, 7 per cent.		
(gold), 1864.....	1,500,000	\$105,000
Central Pacific First Mortgage Coupon Bonds,		
six per cent. interest (gold), payable in		
New York.....	7,336,000	440,160
Total resources for 156 miles.....	\$27,131,504	Tot'l \$545,160

It will be seen that only two of these items bear interest for the payment of which the Company is annually chargeable. The whole interest liability upon this schedule will be but \$545,160 in gold, when the whole amount of First Mortgage Bonds to be issued upon this section of the road are sold ; while its net earnings, by a moderate estimate, will be three or four times that sum.

The above statement does not include the proceeds of further subscriptions to the capital stock, which they are entitled to issue to the extent of a total amount of \$20,000,000.

The total amount of public lands appropriated for the construction of this line is 10,000,000 acres, or at the rate of twenty alternate sections per mile (12,800 acres), the minimum value of which is estimated at \$1 50 per acre, while much of it must be of far greater value on the western portion, from its forests and timber.

The Company is now selling quantities of its alternate sections of land at the minimum rate of \$2 50 in gold per acre ; except to pre-emptors who may deem it advisable to purchase from the Company in order to obtain a clear title at once, where the price is \$1 25 per acre. There is evidence that an active settlement will follow the progress of the road, all of which will augment the value of the unsold lands and add to its business and resources.

Remunerative Business from Local Sources.

It was an important question for the friends and projectors of this enterprise to know whether the business would be sufficient to make it a paying investment ; and this question has already been answered to their satisfaction. It is difficult for persons residing at the East to form an adequate notion of the extent of the existing and prospective traffic between the ports and cities of California and the thriving people of the Great Interior Basin. San Francisco is the great natural centre of business and intelligence for the North Pacific Slope. The manufactures and wares consumed in Oregon, Washington, Columbia, Idaho,

Utah and Nevada, are all drawn thence, and the three last mentioned States draw their subsistence and supplies thence also. Such were the imperative demands of the local transportation between California and the mining regions east of the Sierras, that a steam road even at this cost was an economy. It has been estimated that the wagon freights across the mountains in a single year, before the commencement of the railroad, amounted fully to \$13,000,000; which would of itself, without any increase, warrant the construction of the most expensive railroad. The actual experience of the road justifies the conclusion that the local traffic alone would be sufficient to make it one of the most profitable lines of railroad in the world; independently of the through connection across the Continent, of which it must receive the exclusive benefit west of Salt Lake. The earnings for the three autumn months of 1866, when freight could be forwarded from its terminus on the side of the mountain—were sufficient to pay a dividend of 12 per cent. per annum upon the cost of that portion. Of course a railroad that is able to pay the interest upon its cost, even while in its infancy, would be regarded as exceedingly profitable, even if the whole burden were borne by the road itself. When, however, we consider its constantly increasing business, and that the cost of construction is so widely distributed, its financial success is most assuring.

The following table will show the actual net earnings of the road as it progressed up the mountain side, after the payment of operating expenses, for the past two years, with an estimate for the present year, based upon the same rate of increase; and the relation of the earnings to the interest charges assumed by the road, upon the supposition that the whole amount of bonds authorized will have been issued:

<i>Date.</i>	<i>Average Miles Running.</i>	<i>Net Earnings (gold).</i>	<i>Int. payable on Bonded Debt.</i>	<i>Average net Earnings per Mile.</i>	<i>Average Debt Charges per Mile.</i>
1865....	40	\$280,272	\$102,111	\$7,000	\$2,550
1866....	75	655,883	125,380	8,750	1,672
1867....	150	1,600,000	545,160	10,937	3,633

Thus it will be seen that the road would be abundantly able to pay the interest upon the entire cost of construction and equipment ; but as the general Government and California corporations have assumed the larger portion of the interest charge, the Company is able to carry over a handsome surplus to the construction fund. As the heaviest expenditure is now made, and every extension of the road adds to the value of the whole, by decreasing the ratio of operating expenses at the same time that it multiplies its own natural business, the point of financial difficulty has been passed. Once across the mountains a whole scheme of industrial enterprises in Nevada and Idaho stand ready to be quickened into activity, which have hitherto been beyond the limit of profitable working. With the topographical, climatic and financial difficulties subdued, the Central Pacific Railroad of California becomes a settled and imminent success.

Increase of through Traffic.

Estimates have been made of the probable amount of the through traffic which will pass over the main trunk line from the Pacific to the Missouri. The existing through trade between New York and San Francisco affords some basis for the calculation, and is given as follows ;

Ships going from the Atlantic round Cape Horn—100....	80,000 Tons.
Steamships connecting at Panama with California and China	
—55.....	120,000 “
Overland Trains, Stages, Horses, &c.....	30,000 “
Total.....	230,000 Tons.

Thus, we have two hundred and thirty thousand tons carried westward ; and experience has shown that in the last few years, the returned passengers from California have been nearly as numerous as those going. There can be no doubt that the completion of the Pacific Railroad will not only open the way to many persons now wishing to visit that coast, but also afford the opportunity to thousands at the Far West to revisit their Eastern homes. The following figures indicate the passenger business as now carried by ocean and overland conveyance :

110 (both ways) steamships.....	50,000
200 " " vessels.....	4,000
Overland (both ways).....	100,000

Number per annum.....154,000

At present prices (averaging half the cost of the steamships), for both passengers and tonnage, we have this result :

154,000 passengers at \$100.....	\$15,400,000
460,000 tons rated at \$1 per cubic foot...	15,640,000

Present cost of transportation.....\$31,040,000

That a remarkable stimulus will be given to travel, emigration, mining, trade, and foreign commerce is unquestionable ; and it is not unreasonable to suppose that, at half the above rates, the revenues will be three times the above sum, half of which will be the natural business of the Central Pacific.

Exhibit of Earnings and Expenses.

The following table of earnings and expenses for the two years from January 1st, 1865, to December 31st, 1866, inclusive, will show the growth of the business of the Road as its line has been extended from point to point, and demonstrate the financial success of the enterprise :

Months.	1865.			1866.		
	Gross Earnings.	Operating Expenses.	Net Earnings.	Gross Earnings.	Operating Expenses.	Net Earnings.
January.....	\$11,040 89	\$93,447 77	\$319,956 88	\$25,759 14	\$10,793 19	\$14,965 95
February.....	10,479 55			29,772 13	9,916 47	19,855 66
March.....	15,330 26			44,409 92	12,933 85	31,476 07
April.....	20,076 26			52,993 17	13,013 17	39,980 00
May.....	22,939 36			65,115 83	15,507 64	49,608 19
June.....	32,429 07			67,429 78	16,001 23	51,428 55
July.....	35,633 38			84,756 39	18,867 76	65,888 63
August.....	39,247 42			111,770 35	25,143 32	86,622 03
September....	60,302 62			114,400 00	25,168 56	89,231 44
October.....	65,925 34			127,065 96	18,554 55	108,511 41
November....	48,033 40	13,994 15	34,039 25	86,236 96	20,234 55	66,050 41
December....	40,454 45	14,227 61	26,226 84	55,257 33	22,992 53	32,264 75
Total.....	\$401,942 00	\$121,669 53	\$280,272 47	\$865,016 96	\$209,133 87	\$665,883 09

This exhibit is very satisfactory, showing the gross receipts for 1866 to have reached \$865,016 in gold, of which two thirds was net profit.

It will be observed that the ratio of operating expenses to the gross earnings is less than 30 per cent., while in the Atlantic States it ranges from 65 to 85 per cent. This is partially explained by the fact that the rates for transportation are *five times those of the Atlantic States, being ten cents per mile for passengers, and fifteen cents per ton per mile for freight, in gold.* The operating expenses are but little greater, and constantly decrease in ratio as the road progresses. The management of the road has been exceedingly frugal, notwithstanding some exceptional outlays attending a new line under untried conditions.

High as these rates may seem to persons familiar only with the low tariffs of Eastern roads, they are deemed entirely satisfactory, and are readily paid, being less than one-third the rates heretofore paid for transportation by teams over the same region.

The following Table of Earnings and Operating Expenses of several leading railroads, for the past fiscal years, from the *Stockholder*, illustrates the remarkable advantages enjoyed by the Central Pacific in this respect :

NAME OF ROAD.	Date.	Miles operated.	Gross Earnings.	Expenses, including Taxes.	Per Cent- age of Ex- penses to Earnings.
Atlantic & Great Western Railway	1866	507	\$4,833,489 86	\$3,522,460 23	72.80
New York Central	1865	657	13,976,524 39	11,320,809 94	80.29
Do. Do.	1866	692	14,596,785 68	11,335,673 24	77.66
Philadelphia and Reading	1866	556	10,902,819 00	6,838,747 00	61.80
Cleveland, Columbus & Cincinnati	1865	138	2,386,132 50	1,550,622 29	64.90
Bellefontaine	1865	202	1,675,164 96	1,274,225 45	76.07
Pittsburg, Fort Wayne & Chicago	1866	433	7,467,217 56	5,147,686 54	68.90
Erie	1865	797	15,434,774 72	11,154,930 46	72.27
Cleveland & Pittsburg	1866	225	2,351,905 83	1,697,179 47	72.00
Pennsylvania	1865	550	17,459,169 49	13,270,058 54	76.00
Do.	1866	559	16,533,882 49	12,790,609 54	77.13
Michigan Central	1866	328	4,416,490 51	2,808,375 92	63.20
Chicago & North Western	1865	930	6,820,749 75	4,621,361 84	67.75
Ohio & Mississippi	1865	340	3,793,605 45	2,772,897 45	73.10
Central Pacific	1865	*40	401,942 00	121,689 53	30.28
Do. Do.	1866	*75	865,016 96	209,133 87	24.18

* Average for year.

The statements of the present revenue of the Company from the traffic on the completed portion of their road are very important, as showing that the local trade of California and Nevada alone is sufficient to make the enterprise immensely profitable, independent of the through traffic which

may be looked for when the completed lines shall span the Continent. The Central Pacific Railroad must continue to command this trade without competition, as no company can undertake to construct so costly a line without the Government aid, which is not likely to be granted for the construction of a parallel line.

Business of the Current Year.

Complete returns of the earnings and expenses for the current year have not yet been received. The Winter months being unusually severe, and the Spring unseasonable, the freight could not be forwarded by teams from the temporary terminus of the road during the greater portion of the time. The figures, as far as received, are as follows:

<i>1867.</i>	<i>Gross Earnings.</i>	<i>Expenses.</i>	<i>Net Earnings.</i>
January	\$38,169 22	\$21,564 79	\$16,604 43
February	51,831 38	23,867 79	27,963 59
March	60,029 14	20,115 16	39,913 98
April	81,156 31	21,242 76	59,913 55
May	98,828 59	23,184 44	75,644 15
June	121,702 59	23,689 58	98,013 01
July	174,812 05	30,973 89	143,838 16
August	181,000 00		
September	200,400 00		

Or at the rate of about two millions per annum, of which more than three fourths are net profits; upon less than one hundred miles worked. This is upon the actual legitimate traffic of the road, with its terminus in the mountains, and with only the normal ratio of Government transportation, and is exclusive of the materials carried for the further extension of the road. The Company's interest liabilities during the same period were less than \$125,000. By the time the State line is reached, it is expected the earnings will be at the rate of over three millions of dollars per annum, which will be increased as the road advances. The following is an estimate of the business of the road based upon the two preceding years. It is confidently believed that when the line is completed to the Nevada plains, *the road can be operated for 20 per cent. of the gross earnings*, with the same

schedule of rates. But, in fact, there is good reason to believe that the traffic will be doubled or quadrupled when the entire mountain region is traversed by the locomotive ; so that without estimating the through travel (all of which must then fall to its share), the legitimate business of the road is enormous.

<i>Year.</i>	<i>Average Miles Running.</i>	<i>Net Earnings (gold).</i>	<i>Annual Interest Liabilities.</i>	<i>Surplus Applicable to Construction F.</i>
1865	40	\$280,272 47	\$102,111 14	\$178,161 33
1866	75	655,883 09	125,380 00	530,503 09
1867	150	1,600,000 00	545,160 00	1,054,840 00
Total...		\$2,536,155 56	\$772,651 14	\$1,763,504 42

It will be observed that while its earnings are heavy, the interest engagements of the Company upon the portion of the road completed are very light, about two and a half per cent. only of the total cost of construction and equipment.

It should also be noted that when the California State line is reached, the road is in the vicinity of the famous Washoe region, containing the most valuable mines in the world—having yielded over twelve millions of gold and silver, for each of several years past. It is the seat of an active population, and will receive its supplies, as well as large quantities of timber, over this railroad. The Government Commissioner of Mining Statistics reports that its forty-six companies consume, for mining and smelting purposes, timber and lumber valued at one million dollars per year. When the North Bend of the Humboldt is reached, the rich Idaho mining regions are brought within 36 hours of San Francisco.

Central Pacific Railroad Company's First Mortgage Bonds.

According to the original Pacific Railroad Act the advances of the Government to the several companies upon the completed sections of their lines, were made a first lien upon the respective roads, equipment, &c. Under this provision none of the companies, except the Central Pacific were able to carry forward the work of construction as contemplated. It became evident, however, that the best in-

terests of the country and of the government required the earliest practicable completion of the great enterprise. The General Government was already secured in the priority of accommodation in the use of the road for the transportation of mails, troops, supplies, &c. ; and it was certain that the road would be largely devoted to the public service. Congress, in July, 1864, amended the general law so as to waive the prior lien of the Government upon the roads, in favor of such claims as private capitalists and investors might assume.

The companies building the National Pacific Railroad were authorized "to issue their First Mortgage Bonds on their respective railroads and telegraph lines, to an amount not exceeding the amount of the Bonds of the United States" granted for the same purpose ; and it was provided that "*the lien of the United States Bonds shall be subordinate to that of the Bonds of the said Companies.*" The Government, by this amendment, surrendered its own prior lien, and substituted in its place that of the First Mortgage Bondholders ; being satisfied to look for the re-payment of its own advances mainly to the services of the road, and a small percentage of the future traffic extending over a long series of years, on the conditions prescribed by the original Act.

In accordance with the provisions of this amendment and the Statutes of California, the Central Pacific Railroad Company are now issuing their FIRST MORTGAGE BONDS, having THIRTY YEARS TO RUN, and BEARING INTEREST AT THE RATE OF SIX PER CENT., INTEREST AND PRINCIPAL PAYABLE IN COIN, in the City of New York, upon their railroad, the principal portion of the Main Stem Line, and *the most valuable link in the great National Pacific Railroad*. They are issued only in amount equal to the Government Bonds issued to aid the construction of the same section, viz : \$16,000 per mile upon the first seven miles, and \$48,000 per mile upon the remaining distance to the State line ; or *less than one half the actual cost of construction, and one third the cost and value of the road and equipments, pledged for their redemption*. They are in Bonds of \$1,000 each, with semi-

annual gold coupons attached, and are OFFERED, FOR THE PRESENT, AT 95 PER CENT. OF THEIR PAR VALUE, IN CURRENCY, with accrued interest from July 1st, also in currency.

Advantages of the Bonds.

These First Mortgage Bonds of the Central Pacific Railroad Company therefore possess characteristics and advantages peculiar to them as a class, and which render them far superior to the Bonds of other railroad or private corporations. They are commended to the attention of investors by the following important facts :

First. The First Mortgage Bondholders are joint investors with the National Government, to the same amount only, which places the enterprise beyond the contingencies and risks attending railroads in general.

Second. They are issued only upon completed sections of the road, examined and approved by Government commissioners as a first-class railroad, and consequently always represent a first claim upon a finished, continuous productive property.

Third. The lien of the Government being specially made subordinate to that of the First Mortgage Bonds, there can hardly arise a contingency in which the Company or the Government can fail to secure the First Mortgage Bondholders.

Fourth. As the National Pacific Railroad route is destined to become the great Trunk Line of the Continent, its business must continue to increase, giving assurance of the uninterrupted payment of the interest, and the fullest security for the principal of the First Mortgage Bonds.

Fifth. Published statistics show that the First Mortgage Bonds of leading railroads have, for six years past, been less liable to fluctuations, and have maintained a *higher average selling price at the New York Stock Exchange than even the securities of the Government*, bearing the same rate and kind of interest.

Special Assurances of the Central Pacific Railroad Bonds.

The Central Pacific Railroad Company enjoys all the privileges, grants and subsidies conferred by the Acts of Congress upon the several Companies authorized to construct the National Railroad to the Pacific, and its Eastern forks; and has beside the following *noticeable, exclusive, and important local advantages, peculiar to the Western end of the route*,—considerations which give special security and value to its First Mortgage Bonds :

- I. The Central Pacific Railroad forms the sole Western link of the only railroad route to the Pacific selected and adopted by Congress to receive the Bonds of the Government, as well as the Public Lands, in aid of its construction. *It is exempt from parallel competition*, as it commands the natural accessible gateway between San Francisco and the East. *It must receive undivided the through traffic* which is distributed among the various branch roads building and projected east of the Rocky Mountains.
- II. The most difficult and costly portion of its road is now built, and *the only formidable mountain range in its course is practically overcome*. The line is being regularly and easily worked to the summit of the Sierra Nevadas (94 miles), and in a few weeks the track will be laid to the Truckee River, whence the remainder of the construction will be easy, inexpensive and rapid towards Salt Lake.
- III. The Company has received from the State and principal cities of California, *assistance in money, credit, and valuable property, worth over \$3,000,000 in gold*: and it will have received, upon the completion of the 726 miles between Sacramento and Salt Lake City, more than \$25,000,000 in the Bonds of the United States; or at the rate of over \$35,000 per mile.
- IV. The road enjoys already an immense, exclusive, local trade between Sacramento and the richest portions of Eastern California, Nevada, Idaho, and Utah; sufficient

to make it *one of the most profitable railroads in the world, independently of the through traffic, which cannot be diverted or withheld from it.*

- V. The road lies wholly in territory yielding the precious metals, its revenues are collected in coin, *and its business is conducted on a specie basis.* Its rates for transportation are very advantageous, being more than three times those of roads lying east of it; and the *ratio of operating expenses is less than 25 per cent. of the gross earnings.*
- VI. In consequence of the aid it receives from the General Government, from the State of California, and from municipal corporations, the annual interest obligations which the Company are called upon to assume are very light. The net earnings upon an average of about 75 miles, in 1866, were nearly *three times the amount of annual interest liabilities to be assumed in building it, and were \$235,000 more than the annual interest on the entire amount of First Mortgage Bonds which the Company can issue upon the first 150 miles.*
- VII. By the terms of an Act of Congress, the Pacific Railroad Companies are authorized to make the interest upon their First Mortgage Bonds payable in gold if they so elect. The Central Pacific Company have bound themselves to pay the principal and interest of their Bonds in GOLD COIN OF THE UNITED STATES; and this agreement is made under the provisions of a Mortgage executed and recorded by them in the State of California, wherein specie payments have not been suspended, and where the legislature has passed a special enactment *recognizing, authorizing, and enforcing contracts in which the payment is expressed in gold.* The Company's agreement to pay the PRINCIPAL AND INTEREST of these Bonds in coin is therefore *legally binding*, unlike similar agreements made by companies in States where no such legislative sanction exists.

In these important particulars the securities of the Central Pacific Company possess advantages over those of other companies,—advantages not possessed by other railroad bonds; and they *offer a greater degree of safety, stability and profit combined, than any others now offered to investors.*

The First Mortgage Bonds of this Company are destined to occupy a prominent place among First Class Securities in the money markets of this country and Europe, and will, without doubt, be eagerly sought for, and actively dealt in hereafter, at rates materially in advance of the price at which they are now offered by the Company.

Having been for some time familiar with the operations of the Central Pacific Railroad Company, we are satisfied that they are conducted with rare ability and prudence, and that the energetic and economical management of the Company's affairs entitle them to the confidence of Capitalists and of the public. We have carefully investigated the progress, resources, and prospects of the Road, and have the fullest confidence in its success, and in the value and stability of the Company's securities. The attention of Trustees of Estates, Institutions, and individuals desiring a long, safe and remunerative investment, is especially invited to these First Mortgage Bonds.

Orders may be forwarded to us direct, or through the principal Banks and Bankers in all parts of the country.

Remittances may be made on drafts on New York or Legal Tender Notes, National Bank Notes, or other funds current in this city, and the Bonds will be forwarded to any address by Express, free of charge. Inquiries for further particulars, by mail or otherwise, will receive punctual attention.

All kinds of Government Securities received at the full market price in exchange for the above Bonds.

FISK & HATCH,

BANKERS AND DEALERS IN GOVERNMENT SECURITIES,

and Financial Agents of the C. P. R. R. Co.,

No. 5 Nassau Street, N. Y.

NEW YORK, 1867.

The Central Pacific Railroad.

THE WESTERN HALF OF THE

GREAT NATIONAL TRUNK LINE ACROSS THE CONTINENT,

Being constructed with the AID AND SUPERVISION OF THE UNITED STATES GOVERNMENT, is destined to be one of the MOST IMPORTANT LINES OF COMMUNICATION IN THE WORLD, as it is the *sole link between the Pacific Coast and the Great Interior Basin*, over which the immense Overland travel must pass, and the

Principal Portion of the Main Stem Line between the Two Oceans.

Its line extends from Sacramento, on the tidal waters of the Pacific, eastward across the richest and most populous parts of California, Nevada, and Utah, contiguous to all the great Mining Regions of the Far West, and will meet and connect with the roads now building east of the Rocky Mountains. About **100 miles** are now built, equipped and in running operation to the summit of the Sierra Nevada. Within a few days **35 miles**, now graded, will be added, and the track carried entirely across the mountains to a point in the Great Salt Lake Valley, whence further progress will be easy and rapid. Iron, materials and equipment are ready at hand for **300 miles** of road, and **10,000 men** are employed in the construction.

The local business upon the completed portion surpasses all previous estimate. The figures for the quarter ending August 31 are as follows in GOLD:

GROSS EARNINGS.

\$487,579 64

OPERATING EXPENSES.

\$86,548 47

NET EARNINGS.

\$401,031 17

or at the rate of two millions per annum, of which more than three-fourths are net profit on less than 100 miles worked. This is upon the actual, legitimate traffic of the road, with its terminus in the mountains, and with only the normal ratio of Government transportation, and is exclusive of the materials carried for the further extension of the road.

The Company's interest liabilities during the same period were less than \$125,000. Add to this an ever-expanding through traffic, and the proportions of the future business become immense.

The Company are authorized to continue their line eastward until it shall meet and connect with the roads now building east of the Rocky Mountain ranges. Assuming that they will build and control half the entire distance between San Francisco and the Missouri River, as now seems probable, the United States will have invested in the completion of **865 miles \$28,592,000**, or at the average rate of **\$35,000 per mile**—not including an absolute grant of **10,000,000 acres** of the public lands. By becoming a joint investor in the magnificent enterprise, and by waiving its first lien in favor of the First Mortgage Bondholders, the GENERAL GOVERNMENT, IN EFFECT, INVITES THE CO-OPERATION OF PRIVATE CAPITALISTS, and has carefully guarded their interests against all ordinary contingencies.

The Company offer for sale, through us, their

FIRST MORTGAGE 30-YEAR 6 PER CENT. COUPON BONDS,

Principal and Interest payable in Gold Coin, in New York city. They are in sums of \$1,000 each, with semi-annual gold coupons attached, and are selling for the present at **95 per cent.** and accrued interest from July 1st added, in currency, at which rate they yield nearly

NINE PER CENT. UPON THE INVESTMENT.

These Bonds, authorized by Act of Congress, are issued only as the work progresses, and to the same amount only as the Bonds granted by the Government; and represent, in all cases, the *first lien* upon a completed, equipped, and productive railroad, in which have been invested Government subsidies, stock subscriptions, donations, surplus earnings, etc., and which is worth more than three times the amount of First Mortgage Bonds which can be issued upon it.

The Central Pacific First Mortgage Bonds have all the assurances, sanctions and guarantees of the Pacific Railroad Act of Congress, and have, in addition, several noticeable advantages over all other classes of railroad bonds.

First.—They are the superior claim upon altogether the most vital and valuable portion of the through line.

Second.—Beside the fullest benefit of the Government subsidy (which is a subordinate lien), the road receives the benefit of large donations from California.

Third.—Fully half the whole cost of grading 800 miles eastward of San Francisco is concentrated upon the 150 miles now about completed.

Fourth.—A local business already yielding three-fold the annual interest liabilities, with advantageous rates payable in coin.

Fifth.—The principal as well as the interest of its Bonds being payable in coin, upon a legally binding agreement.

Having carefully investigated the resources and prospects of the road, and the management of the Company's affairs, we cordially recommend these Bonds to Trustees, Executors, Institutions, and others as an eminently *sound, reliable and remunerative form of permanent investment.*

Conversions of Government Securities into CENTRAL PACIFIC FIRST MORTGAGE BONDS now realize for the holders about **Twelve to Eighteen per Cent. Advantage**, WITH THE SAME RATE OF INTEREST.

Bonds, Pamphlets and Maps can be obtained at the office of the Company, 54 William Street, New York. Orders can be sent direct or through Banks and Bankers, when the Bonds will be sent by Express, free of charge.

FISK & HATCH,

*Bankers, and Dealers in Government Securities,
and Financial Agents of the C. P. R. R. Co.,*

No. 5 NASSAU STREET, NEW YORK.

William Morris Esq

TWELFTH DISTRICT COURT

CITY AND COUNTY OF SAN FRANCISCO.

CENTRAL PACIFIC RAILROAD COMPANY

vs.

ALFRED A. COHEN.

ARGUMENT OF MR. COHEN, THE DEFENDANT, IN
PERSON, BEFORE THE HON. W. P. DAIN-
GERFIELD, PRESIDING JUDGE,
WITHOUT A JURY.

Phonetically Reported by the Official Reporter of the Court.

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TWELFTH DISTRICT COURT, CITY AND COUNTY OF SAN FRANCISCO.

CENTRAL PACIFIC RAILROAD COMPANY

VS.

ALFRED A. COHEN.

STATEMENT OF THE CASE.

The defendant, prior to August, 1868, was the owner of a majority of the stock in two ferries running from the City of San Francisco to the opposite shore of the Bay of San Francisco, and two lines of railroad connecting therewith. He sold his interest in these properties to Leland Stanford, C. P. Huntington, Mark Hopkins and Charles and E. B. Crocker, who were the Directors of the Central Pacific Railroad Company. The sale of what is known as the Oakland Railroad and Ferry was made in August, 1868, and of the Alameda Railroad and Ferry in August, 1869. After these sales and before payment the defendant remained in possession of the property, and managed it for account of the purchasers until August, 1870, when it was consolidated with the Central Pacific Railroad. After the sales, intimate, social and business relations grew up between the purchasers and the defendant, and a short time after the before-mentioned consolidation, an arrangement was made between the plaintiff and defendant, that the latter should enter its service as Agent and Attorney, at an annual salary, but that his duties should not be such as to interfere with his own business. This arrangement continued until September 30th, 1875, when defendant withdrew from plaintiff's service.

On August 1st, 1868, the defendant, William C. Ralston, Louis McLane and Oliver Eldredge, purchased from one Henry B. Tichenor an undivided three-fourths of a certain parcel of land in the City of San Francisco, known as Block 9, for the sum of \$200,000 for the whole Block, Tichenor retaining one-fourth; and about January 1st, 1869, the same purchasers and Tichenor bought from the Pacific Mail Steamship Company a large amount of property adjacent to Block 9.

In October, 1869, Huntington, acting on behalf of the Western Pacific Railroad Company, of which he was a Director and Vice-President, negotiated with Tichenor for a lease of one-half of Block 9, and at the same time procured Tichenor to give to the Contract and Finance Company, in which Huntington was a one-fourth owner, an option to purchase said Block 9 at any time within one year, at the price of \$250,000; or, if after one year, and within two years, at the price of \$275,000. In October, 1870, the option was exercised, and the Contract and Finance Company purchased the property for \$250,000.

At the time of the sale of the Railroad and Ferry property before-mentioned, to Stanford and his associates, the defendant had been the owner of a vessel which was engaged in transporting coal from the shipping point of the Black Diamond Coal Company to San Francisco and Oakland, a distance of about fifty miles, for the use of the railroads and ferry boats. After their sale he continued such transportation,

with the knowledge and consent of the purchasers ; and the latter being the owners of two other vessels, chartered them to defendant for the purpose of being used in such transportation, and afterwards sold them to him. The vessels had cargo only one way, and the rate of freight on the coal was one dollar per ton, which included loading and unloading.

The intimate relations between the defendant and plaintiff and its officers continued until about January, 1876, when a quarrel occurred between the defendant and Crocker, one of the Directors of the company, accompanied by acts of hostility on Crocker's part, and the defendant then accepted employment to advocate the passage of a bill which was pending before the Legislature of California, to regulate the rate of charges on the plaintiff's railroad—whereupon the plaintiff, for the purpose of destroying the defendant's influence, commenced this action, alleging that it had employed defendant in October, 1869, to purchase Block 9 ; that defendant purchased it for \$200,000 ; that by a fraudulent and secret agreement with Tichenor, reported the purchase at the price of \$250,000, and that defendant retained \$50,000.

The proof at the trial utterly failing to sustain any such averments after the plaintiff's evidence was all in and the defendant had moved for a non-suit, the plaintiff, by leave of the Court, added to its complaint a further allegation that the defendant being, at the time of the purchase, the agent of the plaintiff, had an interest in the property and concealed such interest from the plaintiff and advised the purchase at a price beyond its value.

The complaint contained another charge, stated as a separate cause of action, that the defendant, being the agent of the plaintiff, had taken advantage of his position and entered into a secret arrangement with one Cornwall, the agent of the Coal Company, whereby defendant was to have the transportation of the coal at one dollar per ton, which was fifty cents per ton above the market rate, and which sum was added to the price of the coal and paid by the plaintiff, whereby it was claimed the plaintiff was defrauded out of the sum of about \$50,000. This last alleged cause of action was twice amended before the plaintiff finally closed its case.

On the trial, Stanford, president of the corporation plaintiff, testified that the negotiation for the purchase of Block 9 was made by Huntington with Tichenor ; that he, Stanford, objected to the price, but that Huntington said if the company would not take it at that price, of \$250,000, he would take it himself.

On the coal transportation the same witness testified that he knew that defendant was doing the transportation ; that the vessels were chartered and afterwards sold to defendant for that purpose, and that he knew they were to be run for the profit or loss of defendant, as the case might be, and that if there had been any loss his company would not have been liable for it.

After the testimony had been presented on both sides, and the plaintiff's counsel had made the opening argument, the Court announced that it did not desire to hear from the defendant on the question of the transportation of coal, and the defendant's argument was confined to the evidence relating to the purchase of Block 9.

The complaint in this case was filed on March 7, 1876 ; the defendant immediately put in his answer without awaiting service, and had the cause set for trial on April 17th, when the plaintiff asked a continuance until July 10th, which defendant opposed, but was granted by the Court. A further postponement to July 18th was granted at the plaintiff's request, on which day the trial commenced before the Judge of the Court, the Hon. W. P. Daingerfield, a jury having been waived by the parties.

The closing argument for the plaintiff was concluded on October 12, 1876, when the Judge, without taking the case under advisement, immediately announced his finding for the defendant on both counts of the complaint.

TWELFTH DISTRICT COURT,
CITY AND COUNTY OF SAN FRANCISCO.

CENTRAL PACIFIC RAILROAD COMPANY

VS.

ALFRED A. COHEN.

ARGUMENT OF MR. COHEN, THE DEFENDANT, IN PERSON,
BEFORE THE HON. W. P. DAINGERFIELD, PRESIDING
JUDGE, WITHOUT A JURY.

PHONETICALLY REPORTED BY THE OFFICIAL REPORTER OF THE COURT.

OCTOBER 3d, 1876.

At the conclusion of the testimony for the defendant,

Mr. Haight said : May it please the Court, the defendant rests.

Mr. Cohen—If your Honor pleases, we are prepared to submit the case at this time without argument.

Mr. McAllister—I cannot agree to that on the part of the plaintiff. I desire to sum it up.

Mr. McAllister having made the opening argument on the plaintiff's case, the Court adjourned.

MONDAY, October 9th, 1876.

On the opening of the Court Judge Daingerfield said : Gentlemen, I wish you would confine yourselves this morning, in the argument as to Block 9, to the consideration of the case of the Bank of London against Tyrrell, particularly on the point as to whether, admitting the fact for the sake of the argument, that Mr. Cohen was the attorney in fact of the railroad company before the sale of Block 9, whether that position would make it his legal duty to disclose his interest, if any he had. Of course you are at liberty to discuss any other points you please, but that is the point particularly on which the Court desire to hear you.

Mr. Lake—I understand your Honor does not desire to hear anything further relating to the coal transaction ?

The Court—I do not ask you to, because I have my own views about it. I have thought about it and the law in that connection, and I do not desire to hear any more argument about the coal transportation, but with regard to the other point I desire to exercise the right that the Court has to ask instruction from the lawyer discussing the case.

ARGUMENT OF DEFENDANT IN PERSON.

Mr. Cohen then said :

May it please the Court, in pursuing the somewhat unusual course of addressing your Honor in argument in a case where I am also defendant, it is due to myself, as well as the able and learned counsel who have aided in my defense, that I offer some brief words of explanation.

I do not need to say to the valued personal friends who have represented my interests here, nor to your Honor, that I fully appreciate their learning, ability and zeal which has been so untiringly displayed in this case. Were this an action brought in the ordinary course of business, for the mere purpose of determining conflicting rights; were it an action in which money only was involved, I should not be addressing this Court. But it is impossible that my counsel should know, it is impossible that any person other than myself can know, the peculiarities, the purposes, the inspirations—if I may use the phrase—of the plaintiff in this action. It is impossible that counsel, however learned in the law, however observant of events, however experienced in deducing conclusions from circumstances, can comprehend the full force and significance of the cowardly conspiracy against character, which I am here to expose, not merely to your Honor, but to that other and larger tribunal of public opinion, which has watched and is watching and listening to all that occurs in this Court-room—that tribunal whose unerring judgment must bring to me and mine a condemnation or vindication of greater moral consequence than any that can be pronounced by a Court. And in saying this, it is probably hardly necessary for me to say to your Honor, that I expressly disclaim all intentions of disrespect. I know the importance, the very great importance, of the opinion of a just, careful, able and impartial lawyer and judge like your Honor, but there is no judgment that can be pronounced here that will weigh in importance against those other and greater questions, those semi-public questions which are involved in this case, questions upon which the people will pass, if they have not already passed, irrespective of the decrees of courts.

Whether, for the remaining years allotted to me here, I shall or shall not be the poorer for the sum of money which is claimed by the plaintiff in this case, is a matter at last of small consequence to me, and even though it engulfed the savings of a lifetime, yet is it still a matter of small consequence compared with the vindication or degradation of character which is involved in this action.

Now, sir, if it be thought irregular in me to refer here to the trial at the bar of public opinion, I plead in excuse that it is not I who have appealed to that or any other tribunal. Before that great tribunal, as well as here, the plaintiff is the one who has inaugurated proceedings,

The complaint in this action—I mean the original, unpatched, unamended, unconstructed complaint—was published in all the journals of this city before it was ever filed in the office of the Clerk of this Court. The purpose of the plaintiff to crush the defendant, to blacken him in the esteem of his fellow-citizens, to hold him up to public

execration as a dishonest agent, as a betrayer of trusts, as a secret and treacherous plunderer of men who confided in his integrity, was manifested after the complaint in this action was drawn, but before it was ever laid upon the desk of the ministerial officer of this Court. To accomplish this purpose, no means that the plaintiff could command have been lacking. Writers who could stab with the dagger of innuendo have found profitable employment for their practiced pens. Witnesses who could stretch their consciences to the subtleties of recollection by association of ideas, or dwarf them to the safe oblivion of *non mi ricordo*, have been marshaled here in line and headed by General Superintendent Towne and Mr. Henry B. Tichenor ; have been marched to the witness-box, even as the pauper children of England march to their meals, careless of the livery of degradation they wear, and intent only upon their porridge ; and lastly, even the noble profession of which your Honor and myself are proud to be members, has been abased to the exigencies of private and corporate malice, and forced to drag itself in the very mire of slander. In making this last remark I think it right and proper to say that I do not include the learned counsel who has tried the case here for the plaintiff ; he, at least, has had the courage of his opinions, and has come here openly and manfully to sustain them, and I hope I shall not be deemed guilty of flattery when I say that the ability which he has exhibited in the trial of this cause is worthy of all admiration. I do not believe there is another member of this bar who could have shown the amount of ingenuity which he has displayed in transmuting that which Governor Haight termed the thousand nothings of this case into the form and semblance of a genuine cause of action. The fortitude with which he has nursed this action day by day and kept it in life and vigor in the face of overwhelmingly adverse facts, must certainly excite our astonishment, even if it does not deserve our commendation. During the progress of this case I had been much pained by the course which the learned counsel had chosen to adopt in making a personal attack upon myself, but I was glad, at the last meeting of this Court, to hear in his opening statement that he deprecated any further acrimony in this case, and I shall be mindful on my part to treat his views, where I may have occasion to speak of them, in the same spirit. Of course, I recognize that it is not only the right but the duty of the counsel to comment upon my evidence and upon my acts as a party, or upon any other fact inside of the record in the case, as his judgment may dictate. I am prepared to accept all the consequences that may come to me from the double position that I assume here of counsel as well as party ; but in that double attitude I accept as sincere the statements of counsel that the rules of decorum and good taste will be maintained to the end of this controversy.

I regret, may it please your Honor, that the plaintiff in this case should have deemed it either wise or just to attack me in this suit. But since I have been attacked, since the assault has been made, since I have been brought into Court on a false and frivolous charge, since the tongue of vituperation has been darted at me, since I have been arraigned before the bar of public opinion, since a subsidized press has found it to its interest to misrepresent me, I propose, in reply, to expose the purposes and motives of all who have been thus engaged.

Standing here before your Honor as a defendant pleading against a plaintiff who seeks an unjust judgment ; standing before the community in which I have lived an active life for over twenty-six years ; as a citizen defending himself from iniquitous assault, I declare that this action on the part of the plaintiff is utterly without merit or justification.

And let me say here, sir, that I crave no half justification. If I have done the

acts which the plaintiff charges me with doing, then it is impossible that I could have ignorantly offended. If at the time averred here with respect to the purchase of Block 9, I was as to such purchase the agent of the plaintiff, if being such agent I concealed my interest and induced it by my advice to purchase the property for a price above its value—if I ever, at any time, stood in any such relation toward the plaintiff as to inhibit me from ever having been interested in the real estate it purchased or in the transportation of the fuel it consumed, then I certainly knew it, and whatever was done by me must be held by you to have been done, and was done, in the full light of both the law and the facts. As a business man, as a lawyer, I am supposed to know, and I think I do know, the laws and usages of agency, and whatever may be held by your Honor to have been done by me, I am prepared to accept the full responsibility of.

I shall endeavor to show before I conclude that from the evidence before your Honor it is impossible that the plaintiff can expect to recover any judgment in this case; and I assert that it knew before it filed its complaint, and when it filed its complaint, and after it filed its complaint, just as well as it knows now, that it had no cause of action against me; none whatever. I assert that this whole proceeding, complaint, newspaper trial, Court trial, newspaper abuse and purchased vilification of counsel learned in the law has been heaped upon me because, as a citizen, I opposed the pernicious plans of this Central Pacific Railroad Company, and because, as a lawyer, I dared—yes, that is the word—*dared* to go before a committee of the Legislature of this State to protect the people of California against the oppressive exactions of this corporation.

I have a right in defending myself here, to comment upon the animus of this prosecution, and I propose to exercise that right, and, sir, I thank God that I can exercise it here; that here, at least, is one place where the citizen may be heard, without feeling that he is speaking to either a prejudiced or a purchased audience. I know that the power of this great corporation, which has been not inaptly compared to that of the devil-fish, has been extended in almost every direction. I know that the clank of its golden fetters has been heard along the floors of legislative halls. I know that the mildew of its corrupting influence has crept over the desk of Supervisors and Assessors. I know that its gilded finger of menace has been raised to make dumb voices that should have been heard on the side of the people in caucus and in convention. But as yet even its ubiquitous ministering messengers of corruption have not dared to cross the threshold of our Courts; as yet it has shrunk back abashed from the pure and undefiled presence of justice; as yet her tribunals are left to those who will neither bend to its persuasion nor abase themselves before its power. So long as this shall be so, this great cormorant may be defied by the humblest citizen whose rights it may seek to invade. If it shall ever be otherwise than so, the time for revolution will have arrived, for the days of government by the law will be numbered.

Sir, my relations with the individuals who compose this corporation, and which the plaintiff's counsel has denominated the Stanford party, commenced in the summer of 1868. Your Honor will recollect that I was at that time the manager and the principal owner of the ferries between this city and the Alameda shore and their connecting short lines of railroad. At that time I was also engaged in the business of the transportation of coal for the Black Diamond Coal Mining Company to the railroads and ferries in question, and at the same time I was the owner of the only interest in Block 9 that I ever held. There was never anything in any position I subsequently held towards the plaintiff that would have prevented me from buying or owning Block 9, or engaging in the business of freighting.

But I desire to invite the attention of your Honor to the fact that the business of transportation, such as it was, and the ownership of that interest in Block 9, such as it was, were both established and existing long before I had anything whatever to do with the plaintiff, or even with the individual officers of the plaintiff, in any capacity whatever. In August, 1869, I sold the Alameda Railroad and Ferry to the same parties—the Stanford party—to whom I had previously sold the Oakland Railroad and Ferries in the summer of 1868. I sold both at a reasonable price, and I waited a long time for the payment, and the very property sold, notwithstanding the evidence of Crocker, which I will comment on hereafter, provided in itself the means of payment by the issuance of bonds, so that in reality these two valuable properties never cost this Stanford party anything whatever. Now the evidence is, that after the sale of the Oakland road and ferry in 1868, I purchased, for account of Stanford, Huntington, Hopkins and the Crockers the outstanding stock of the Oakland Railroad. The contract between those persons and myself, which is in evidence already, is dated August 7, 1868, and the other evidence in the case shows that I remained president of the company until its consolidation with the plaintiff in August, 1870. But between the purchase of August, 1868, and the time of the transaction with respect to Block 9, in October, 1869, the only transaction I had with any of the officers of the company was the buying of the minority stock of the Oakland Railroad, which Stanford says was intended to be a friendly act on my part, which I will afterwards refer to, and the transaction had with Mr. Vallejo in the month of May, 1869.

In Stanford's deposition, he is asked whether this transaction of Vallejo was before or after the purchase of the Alameda Railroad, and he replies: "Why, it must have been after; I know no reason why you should have been doing anything for us before the purchase of the Alameda Railroad." Your Honor may not recollect, in the hurried reading of that deposition, that single statement of Governor Stanford.

Q. 407.—Was this transaction before or after the purchase of the San Francisco and Alameda Railroad? A.—I should think it was afterwards, but I do not call to mind the year in which the roads were purchased.

Q.—Will you give us your recollections? A.—I can call to mind no reason why the defendant should be rendering us services prior to the purchase of those roads.

And there was no reason, and there was no such relation existing, as Your Honor must certainly determine. But taking that answer of Stanford's in connection with the testimony of William H. Patterson, your Honor cannot fail to conclude that this transaction with Vallejo in the Summer of 1869 was not in the capacity of agent for the Western Pacific. It was simply a friendly act, done under the circumstances detailed in the testimony, to enable these parties to lay their track through Mr. Vallejo's land, to remove his flume and to enable them to open their road for business without going to the delay, trouble and expense of proceedings for condemnation. Now great stress is laid upon that paper, because it is signed Western Pacific Railroad Company by Alfred A. Cohen. It does not say in what capacity it is signed. Your Honor knows, from your own practice, if you signed a paper that you were authorized to sign, you would sign it as attorney-in-fact or as attorney-at-law, as the case might be. But this shows upon its face that it was signed without any fixed capacity attached to the person who undertook to represent the Western Pacific Railroad, and Mr. Patterson tells you that it was so represented at the time. In considering this question and in arguing this case, so far as it is possible, I propose to leave my own testimony out entirely. My associate can make such use of

that as he thinks proper, but I am arguing upon all the other testimony in the case. The testimony on this point shows to your Honor that I simply took the responsibility of signing the paper because it appeared to be somewhat of an urgent matter. Governor Stanford tells you, and Mr. Crocker has told you, that there had been a great deal of delay; that they had employed regular agents to attend to this matter; among others he mentions the name of Harvey Brown. But yet they had failed to get the facilities or the easement which they required, and they asked me to undertake it. I have told you the reason why, but, as I say, I do not rely upon anything that I have stated myself in testimony. I propose to argue this proposition and all others upon the documentary proof and upon the testimony of all the other witnesses. It was a very trifling matter at the best, but it was a matter that was liable to give them some considerable trouble, as your Honor can see; and I not only took the responsibility of signing my name, but I paid the money myself, and the check was produced here which was given in settlement of that transaction, which was my own private check.

I did what I ought to have done. I said at the time, frankly to Mr. Vallejo and his counsel, Mr. Patterson, as he has told you, that I had no authority to bind the Western Pacific Railroad Company; but I thought that it would respect whatever I did. Now, upon this one little friendly act, done at this time without any compensation, but for the purpose of accommodating gentlemen with whom I had previously had large business interests, and who were at that time owing me a large sum of money, it is sought to found a general agency so as to give an entirely false coloring to all the transactions had with the Stanford party at or about the same time. If from one friendly office, done in this way, a man is to be constituted the general agent of twelve railroad corporations, the names of half of which he had never heard of, either before that time or until he came into Court, I think it would be very much safer for him to take his chances of being in the neighborhood of a small-pox hospital than a railroad office. I do not understand that an agent of a corporation, including the attributes and powers of a general agent, can be created in this loose way, and especially is this the case in this State with regard to a railroad corporation whose officers are created and named in the statute of incorporation, and whose duties and powers are specifically defined by that statute. At least there must be some formal declaration by the corporation of the creation of such agency, and expressed through the votes of directors; but these two acts, that of purchasing some stock in a railroad company for the account of the Stanford party, and for the most of which I gave my own obligations, my own notes—and this for the Western Pacific—are the only acts shown to have been done by the defendant prior to the month of October, 1869, when the contract between Huntington and Tichenor was made for the lease of one-half, with the privilege of the purchase of the whole of this Block 9. There was another matter brought in here from which it was argued that the agency for the Western Pacific was created, and that was the building of the schooners, the *Elko* and *Truckee*, which were afterwards chartered to me and then sold to me. It was stated that these were built for the Western Pacific Railroad Company, and that they were charged to the Western Pacific Railroad Company. Now, the ledger account of the Oakland Railroad, which has been put in evidence here, shows that no such account as that was opened. There is an account on those books—not the Western Pacific Railroad account, as has been said, but the Barge Construction account, and, subsequently, after those vessels had been transferred to the Western Pacific, a red-ink line is run over the first title of the account, and underneath is written “Schooners *Elko* and *Truckee*,” and the account was in September, 1870, the time of the consolidation of the two companies transferred

to the Central Pacific Railroad Company, not the Western Pacific. We had some evidence upon that point from Governor Stanford. He was asked who built those vessels. He said the Western Pacific Railroad Company built them. He was asked who paid for them. He said, "I cannot call to mind just now who paid for them, but I think you did." I said, "What then?"

Mr. McAllister—By "you" you mean yourself individually?

Mr. Cohen—Yes, sir. He said the defendant paid for them. Being examined a little further on that, he said, "I recollect that you paid the bills, and we afterwards paid the money back to you." Now, it was no such thing; no money was ever paid back, nor did I ever pay any money on the bills for the construction of these schooners. As these books show, it was paid by the Oakland Company, of which I was the President; therefore, it was the most natural thing in the world that I should be superintending and attending to their construction—but instead of Governor Stanford or the Western Pacific Railroad or the Central Pacific Railroad paying any money for these vessels, they derived them by reason of the consolidation of the Central Pacific with the Oakland Railroad Company, whereby the property of the Oakland Company all passed to the Central Pacific. It is not a very important or material matter who did pay for them; but that is one of the several things that I shall call your Honor's attention to as this argument progresses, to show that the infallibility which is claimed by the learned counsel for Governor Stanford's testimony is not justified; that he has been during the course of this trial very grievously mistaken, and before I get through, I shall also show to your Honor that except upon one point in this case, the testimony of Mr. Stanford, Mr. Huntington, Mr. Crocker and General David D. Colton are at entire variance. They do not agree upon any of the material facts in this case, excepting one. Then it was shown that after this time, after the lease of this Block 9 and the taking the option to purchase in 1869, I accepted an employment to attend to any cases that might arise growing out of the collision that had occurred between a train of the Western Pacific and a train of the Alameda Railroad. All the circumstances attending that employment are fully set out in the evidence on the part of the defense, and I do not find that it is anywhere contradicted. This was an employment in the interest of the Western Pacific, and the only one that has been shown; but it was special, limited and temporary in its character, and no more constituted me the general agent of that company, to attend to all its affairs, or impressed upon me the fiduciary character of a general agent, than does the employment of Mr. McAllister in this case constitute him the general agent of the plaintiff. But your Honor will bear in mind that that employment, such as it was, whatever the responsibilities or duties that attached to it, was after the negotiation between Huntington and Tichenor for the lease and the option of that Block 9 had been agreed upon and consummated by the drawing of the papers of October, 1869, so that it cannot in any way figure with respect to that transaction; and, in speaking of Mr. Stanford's deposition and of the reliability which is to be given to the evidence of that witness, I invite your Honor's attention to this: We offered Mr. Stanford's deposition for several purposes; first, to point out the difference in his recollections at that time, just after the commencement of this suit, and his recollections when he came upon the stand. I will point out those differences as we go along. Another purpose was, to show to your Honor that from the questions propounded to this witness at the time of the taking of the deposition, which was taken but a very short time after the commencement of this action, the defendant then, in the form of the questions which he put to the witness, gave his explanations of the transactions between himself and the plaintiff, and if your Honor will take the trouble to pursue

the investigation of these questions and compare them with the defendant's evidence in this case, you will find that the facts as detailed by him there in the form of the questions which he put, are the same facts which he stated here. Bear in mind that the transactions which are made the basis of this action, and especially that in relation to the real estate, arose about seven years' ago; that the defendant had no notice, knowledge, or information of any kind that this action was to be commenced; that no demand of any kind had ever been made upon him; no information conveyed to him that the plaintiff had against him any cause of action whatever, or sought to recover anything from him, but the first knowledge that he has of this case, is reading the complaint gotten up by the plaintiff's regular attorney, Mr. Sanderson, and gotten up, as he tells you, in great haste and published in the newspapers. The first time, I say, that the defendant ever saw that complaint, was when it was published in the newspapers. To this day it has never been served upon him. The very next day, although confined—as the testimony shows—to his bed by sickness, he drafted the answer in this case; without having any time to consult any papers or documents, without having had any opportunity of consultation with anybody, he drew and within a few days afterwards filed his answer. Now, as I say, recollecting the form of the questions in that deposition, and comparing them with the evidence that the defendant has given here, your Honor will see that the statement of the defendant is not a statement that has been made up after he has heard the case of the plaintiff, after he has heard the testimony of its witnesses, but right at the very outset of the case, in the form of the questions which he puts to the President of the corporation plaintiff, he exposes to the corporation and its counsel his answer to the charges they have made. I think that fact in itself should command in your Honor's mind some degree of confidence for the statements which the defendant has made here, if there are any, which are not supported by documentary or other proof. Now, sir, there is no proof before you whatever that I accepted any regular employment from the plaintiff or from the Western Pacific Railroad Co., or received from it any regular salary, until the arrangement made on or about the 29th of December, 1870, which was made with the understanding, as you have been told by Mr. Stanford, that it should relate back to the 1st of October, 1870. There is some dispute as to the reasons why it should relate back, but I do not see that that is of any importance whatever; it is sufficient that the proof is conclusive that the arrangement was not made before the 29th of December, 1870. There was some confusion, it seems to me, attempted to be created in the opening argument of the learned counsel, and also in the testimony given in rebuttal by Governor Stanford, as to whether that agreement had been made on the 1st of October, and whether the interview of the 29th of December was merely the carrying out of the agreement arrived at on the former date; but it is impossible that such should be the case, as your Honor will see by the correspondence. In December, 1870, Miller, the Secretary of the plaintiff, writes a letter to me, saying: "We find upon the books of the Oakland Railroad Company a charge against you of so much, and we have a charge upon the books of the Central Pacific Railroad Company of so much, making the amount of \$15,700."

Your Honor will recollect that this is December 13th, 1870. Well, that is replied to by the defendant in his letter to Mr. Miller, under date of December 15th, 1870, in which he says: "I will settle with Governor Stanford the amount due me by the Western Pacific and Central Pacific, and will then forward my account or see you in Sacramento at such time as will be convenient." Now, if on the 1st of October, 1870, I had settled with Governor Stanford the amount due to me up to that time, should I, in December, write to Mr. Miller telling him I would see Governor Stanford on that sub-

ject, it shows that the relation of agency, whatever it was, did not commence until subsequently to the letter of December 29th, 1870. In that letter of December 15th is one paragraph I wish to call your Honor's attention to, and, although counsel did not open on it, it is impossible that it should have escaped his lynx-eyed observation. It is on the question of the payment of interest. It says: That as the balance will be in his favor, and a portion of it has been due to him since October, 1869, he did not wish to charge the plaintiff any interest unless the other side so desired. That time of October, 1869, figures here, and your Honor will see from the account that was rendered in 1870, which was a duplicate of the account rendered in 1869, for the purchase of the Oakland Railroad stock for account of the Stanford party, a charge had been made of some 5,000 and odd dollars for commissions upon the stock which had been purchased. Your Honor recollects that those accounts commence at a certain day of 1868, and end on the 21st of October, 1869. That is the explanation of the statement in the letter that a portion of defendant's claim had been due since October, 1869. The account that had been presented read in this way: "Account of stock of the San Francisco and Oakland Railroad Company, purchased for the account of Leland Stanford and others from September 1st, 1868, to October 31st, 1869," and at the foot of it is a charge for commission due, \$5,493. There are so many different forms into which the plaintiff resolves itself. At one time it is the Central Pacific Railroad Company of California, and at another time it is the Stanford party; at another time it is Charles Crocker & Co.; at another time it is the Contract and Finance Company; at another time it is the Western Pacific Company; now it is the Central Pacific Railroad Company, so that anybody at that time dealing did not know—and I did not know positively until after this trial commenced—for whom these different transactions were; and I take now the statements of the plaintiff's witnesses, the plaintiff's officers, to tell me for whom at that time I really was acting. I know this much, however; this much is certain and fixed on my mind, and this much is certain and positive from the evidence in this case, that no agency whatever, that could be deemed to be a general agency that involved general fiduciary relations, ever existed between any of these parties and myself before the 29th of December, 1870, and really not even then. Well, this letter of December 15th, 1870, and the account alluded to in it, remained in abeyance until Mr. Stanford and myself met, on the 29th day of December, 1870, and then your Honor will recollect that a letter was written to Mr. Miller, on that date, inclosing the voucher that is certified to by Mr. Stanford—this celebrated voucher, if I may so term it, because it has been very much commented and harped upon in this case—saying "I have agreed with Governor Stanford that your company will offset your account rendered by you to December 1st, by my account," and that was the way that voucher arose; and your Honor will recollect that no money whatever passed in that transaction. I have chosen to admit here that I was indebted to the Oakland Railroad Company for that sum of money, or, rather, for the larger part of it, although it was not so in fact, and there was a charge against me for the use of the schooners, which made up the balance of the account. It has been sought from that account to show that an agency must have commenced upon the 1st of October, 1869, or somewhere about that time, because it is about the amount of the annual compensation that was afterward agreed upon estimating from the 1st of October, 1869, to the 1st of October, 1870. But it was no such thing. Governor Stanford tells you in his deposition that there were no such arrangement—that there was no fixed rate—nothing had been agreed upon. Though I think I use his language correctly, I will give you the number of the question. He is asked what was the rate of salary, question 298,

and he says : " I do not remember any more than I think we lumped it, and concluded to let it go at that, as it would balance the account." Now, if that agency commenced by a regular retainer of \$10,000 a year in October, 1869, as intimated all through this case, and as counsel attempted to show in his opening, certainly the amount would not have been lumped to close the account. There would have been a fixed sum stated, and if there had been any balance on the one side or the other it would have been liquidated. And I invite your Honor's attention to another fact, and that is the voucher of 1871. Your Honor will see that even at that time, when that account was made out, there had not been any positive agreement as to the amount of compensation that should be allowed.

Mr. McAllister—I understand you to say that there had been.

Mr. Cohen—I will explain that in a minute. Your Honor will see that the form of the bill which was rendered to the plaintiff was this : " Central Pacific Railroad Company to Alfred A. Cohen : To services rendered for one year to September 30th, 1871," that is, one year from October, 1870, but the amount is left blank. I called your Honor's attention at the time this document was put in evidence, that the amount, both in words and figures, was in the handwriting of Leland Stanford, President of the corporation plaintiff. Now, answering the counsel's remark made but a moment since, I have stated and still state that the arrangement made with Governor Stanford was that the compensation that I had been receiving as President of the Oakland and Alameda Roads should continue ; that is, I should be paid for such services as I rendered the Central Pacific Railroad the same rate of compensation which the Oakland and Alameda Company had previously paid me. Supposing that Governor Stanford was advised of that amount, the bill was sent in blank for him to fill up, and he filled it up for \$10,000, but subsequently, his attention being called to the amount the contract really called for, the difference was made up by the allowance for an office and for a clerk, the explanation of this manner of awarding it being that Mr. Stanford as President of the Company was receiving only \$10,000 a year, and he did not wish the books to show that any higher rate was being paid to any other person. Now, sir, I propose right here to discuss the assumption of the plaintiff's counsel—for it is really an assumption and not a deduction from the evidence—that before December, 1870, I occupied such a position of trust to the plaintiff as to disable me from selling it a city lot or transporting coal for those from whom it purchased coal. I do not need to say that I do not even for a moment concede that even after December, or any time, I stood in such relation towards the plaintiff as to disable me from selling it land or transportation. But, for convenience sake, I will very briefly analyze the contracts of agency or employment, if there were any such, before December, 1870.

BLOCK NINE.

Mr. Tichenor's evidence is that in July, 1868, he sold Block 9 to Mr. Ralston and myself for the sum of \$200,000, the account of the purchasers commencing on the 1st of August, 1868, which was nearly one year and three months before the transaction between Huntington and Tichenor in 1869, when the arrangement was made for the lease of half of Block 9 and an option given to purchase the whole of it. The contract between the Stanford party and myself for the purchase by them of a majority of the stock of the Oakland Railroad is, as I have said before, dated August 7th, 1868. But as the evidence shows, it really was not executed until some time later. This was a purchase on credit, and that transaction, so far from creating any agency between myself and any of these corporations, simply created the relation of debtor and creditor.

They bought my property ; they did not pay me for it ; they left me in possession of it ; and to suit their own purposes, to accommodate and oblige them, I bought in the outside stock so-called, that is, stock held by other persons than myself and those for whom I had sold. I might stop here a minute to comment upon the reflections that are cast upon me because the transactions with regard to this Block 9 were secret ; because they were not published on all the street corners ; because I did not go on this Plaza and into all the market places and tell everybody that I had bought an interest in Block 9. What were these immaculate gentlemen doing at that same time in respect to the purchase of this stock ? They say : " Mr. Cohen, we want you to buy this stock. We don't want you to tell anybody that you are buying it for us, because if anybody knows you have sold a majority of the stock to us, we shall have to pay a very much larger sum for the balance." That is what they were doing. But they say that I ought to have gone out into the highways and by-places and told everybody that I had bought an interest in Block 9. Now, these transactions with the Stanford party were more than a year before I accepted even the special and limited employment of November, 1869, to attend to the collision cases ; and more than two years before the annual retainer of December, 1870. Surely, in the month of July, 1868, I was not embarked in any conspiracy to defraud this unsophisticated, this simple-hearted, this innocent-minded corporation, for I was at that time engaged in running railroads and ferries of my own ; but perhaps it may be claimed by the plaintiff, for custom has so petrified the face of its habit of claiming, that there is nothing in the heavens above, or in the earth beneath, or in the waters under the earth that it will not claim ; that once in the receipt of a salary or compensation from it at any time or for any purpose, it was my duty to have revived the transactions of my life, and wherever I found that I had done or said or suffered anything, the result of which could affect its present interest, I should have revised and reconstructed or repudiated the transaction so as to give it the greatest possible advantage ; but unless upon such hypothesis, I fail to see, and I do not think your Honor will be able to see, how it is that in the small interest I acquired in the purchase made from Mr. Tichenor, in the year 1868, in this Block 9, I committed any fraud, or laid the foundation of any future fraud upon the plaintiff. I understood, at the close of the counsel's opening the other day, that it was not contended that at the time of this purchase of 1868, I was under any obligation of any kind to the plaintiff in this action, or what the pleader in this case has somewhat inartificially called the constituent corporations. But you are asked by the counsel to believe that the defendant, thinking the Stanford party would buy the Oakland road, planned to buy this Block 9 for the purpose of selling it to the railroad companies at an advance, and in the evidence given on behalf of the plaintiff it was sought to be established that after the sale of the Oakland road was made I secretly, and without the knowledge of any of the Stanford party, erected upon the premises large improvements, for the purpose of committing the railroad to the purchase of this piece of property. I will not stop just at this point to comment upon all the circumstances pertaining to the erection of the ferry slip. I merely say that the correspondence between E. B. Crocker and myself shows that there was nothing secret about the building of the slip and that he was fully cognizant of everything pertaining to it. The importance of that slip, the cost of it and the manner in which it was built, and everything appertaining to it, is one of the circumstances in this case which has been magnified, like everything else, as being an out-of-the-way proceeding. All sorts of false impressions have been created ; I will not say, as the counsel said, " for the purpose of misleading your Honor," but certainly for the purpose of throwing a great deal of odium and unjust

suspicion upon the defendant. A great deal also has been said, and it has been several times alluded to, that E. B. Crocker and Mr. Ralston and Mr. Crittenden, who have been mentioned in this case, are dead, and the counsel asks in his inimitable manner—I don't believe there is any gentleman at this bar can ask a question with more point, or express more in the manner in which he puts a question, than Mr. McAllister—he says: “Mr. Cohen, these gentlemen you speak of here, E. B. Crocker, Mr. Crittenden and Mr. Ralston, are all dead, are they not?” I extremely regret it. Two of those gentlemen were my very warm and intimate personal friends, and I regret their death as much as any person in this community possibly can, but it is certainly not my fault, and there is nothing that has been stated in relation to these gentlemen that I am not, fortunately, able to establish by other proof in this case. We have the correspondence of E. B. Crocker, and what does it show? It shows that he was following this transaction all the time. It shows that he was keeping track of it from day to day, and from week to week. He writes in August, 1868, when we had taken the first lease from the Harbor Commissioners, “Send me a copy of the lease.” It does not seem that there was any great secrecy about the erection of the slip about that time, and you find produced here from the possession of the plaintiff that copy of the lease which was sent to Mr. Crocker. Then the evidence is that the gas company found some fault with the manner in which this ferry slip was to be built, and they interposed objections. Mr. Crocker comes here and he takes part in the settlement of those objections, and finally the objections are obviated and the gas company agrees to adopt a plan that is satisfactory to all parties, and to pay \$1,000. What it was paid for I do not now recollect, but the books of the railroad company state that it was received. After that Mr. Crocker writes again; he says: “I have received the copy of the contract and the new lease at the foot of Second Street.” The copy of the contract with the Gas Company and the new lease at the foot of Second Street. “I think it is a very favorable arrangement for the company.” Was there any secrecy there? Was this slip put up quickly in the night, as some of the counsel's distinguished clients used to fence in water property in 1849 and 1850? Was there any such work as that done in this case? Here was this gentleman, Mr. E. B. Crocker, whom we have proved was the agent of the corporation, having his eyes about him all the time, watching everything that was going on; and his voluminous correspondence—there are thirty odd letters introduced here, written by him to myself about the business of these ferries—shows that he was watching the business all the time, and he knew just as much—as your Honor can see from that correspondence—about everything that was being done with the moneys and the properties of the Oakland Railroad as any other person connected with the company did, myself included. It is not possible that there could be any secrecy, and I will show you, when I come to consider the testimony of Mr. Huntington, that his statement about the enormous improvements that were being made at the foot of Second Street, for the purpose of committing these railroad companies to the purchase of Block 9, and which he says for those already completed and those projected would have amounted to the sum of half a million of dollars, is an entire misstatement, but that all the improvements actually made at that time consisted of a little ferry slip upon the piece of the water front which had been leased by the Board of Harbor Commissioners to the Oakland Ferry Company, according to the diagram which has been exhibited here, which was complete in itself, and the total cost of which up to that time was about fourteen thousand dollars. There was one other fact here that the counsel seemed to lay great stress on, and it was evidently a strong point with him, for he rolled it under his tongue, and he put

it forth from time to time, I think as many as three times during his address here the other day, that Mr. Cohen was in possession of all the plans of this railroad company ; that he knew everything that was going on ; that he inquired from time to time, and was told what they were going to do ; that he inquired from Judge Crocker where the line of the Western Pacific Railroad Company was, and where it was being located, so that he might anticipate their wants and force them into the purchase of this Block 9. Now let us see what there is of that. Your Honor will recollect that the first letter put in by the learned counsel was a letter mentioning the purchase of stock in the Oakland Railroad from a gentleman by the name of Carpentier. I cannot recollect at this moment whether in the 4,000 pages of testimony we have here Mr. Carpentier has figured in this transaction. If he has not, I think he is the only prominent man in the community that has not ; but there is a gentleman of that name who has large landed interests, a modest, quiet, unassuming, unambitious gentleman—a gentleman who never wants anything more than what belongs to him. Well, at that time there was an issue between Mr. Carpentier and myself concerning a portion of the water-front at Oakland, which was claimed by the Oakland Railroad, and evidently Mr. Crocker and myself had been talking on the subject, because on the 2d November, 1868, he wrote me this letter : “ Friend Cohen—Mr. Carpentier talks of going East soon, and I think it will be best to press a settlement with him before he leaves. The longer it is put off the more difficult to arrange.” I do not find that I have preserved a copy of the answer that I made to that letter, but two days afterwards, on the 4th of November, 1868, Mr. Crocker, who was somewhat of a diplomat, writes thus : “ Dear Sir—Yours of the 2d received. Stand strong for unconditional surrender ; if any concession is made of any territory, give up on the north side.” He must have been a southern man. “ Retain the whole of the ground on the south side up to the Western Pacific location.” That is the point of the letter. Hold all the ground on the south side up to the Western Pacific location. Now it would seem as if a person, being told to hold all the ground up to the Western Pacific location, would naturally want to find where the Western Pacific location was, and so we find a letter that has been read here by counsel, dated on the 25th of the same month. It says : “ Dear Judge—Where can I see a map of the route through Alameda County ? ” The next day the learned Judge writes this : “ You will find the line of the Western Pacific Railroad, so far as the same has finally been located, is pretty correctly laid down on Whitney’s map of San Francisco,” etc. Now, this innocent question, asked for the purpose of performing an act which was within the line of my duty as the President of the Oakland Railroad Company ; settling a lawsuit, which I believe was pending in this very Court, is perverted into an attempt to obtain information from Mr. Crocker for the purpose of using it to his detriment. I think your Honor will find the papers are among the files of this Court, and we were trying to agree with our adversary quickly. Judge Crocker was consulted, as he was about everything, as your Honor has seen, during all this business. He was consulted, and he says, If you give up any territory give it up on one side, but not on the side that will be adjacent to the Western Pacific location. Was it not the most natural thing, that I should ask him where that Western Pacific location was, and that he should reply ? Was that asked for any ulterior purpose ? Was it asked for the purpose of getting information to enable me to sell him Block 9 ?

Now, sir, it was in October, 1869, according to the testimony of the plaintiff’s witnesses, that C. P. Huntington went to Tichenor, who appeared of record to be the owner of Block 9, with a view of negotiating for the purchase, but which resulted in his taking a lease of one-half of that property and an option to purchase, and that option—I hope

your Honor will recollect, because it forms a very important feature in this case—was given, not to the Western Pacific Railroad Company, whose agent it is claimed that I was, but to the Contract and Finance Company, which, I believe, is the only corporation mentioned in this case for whom it has not been asserted that I was the agent. There was then nothing in my relations with the plaintiff or the Western Pacific Railroad Company, and there has never been anything in my relations to the plaintiff or any of the corporations, either as a matter of fact or a matter of law, that need have prevented me from inciting Mr. Huntington, or from urging Mr. Huntington to make the contract with Tichenor, which both Huntington and Tichenor swear that they made between themselves in October, 1869. As a matter of fact—fact disclosed by the evidence—I had nothing whatever to do with it. Huntington went to Tichenor of his own motion, and acted under the guidance and inspiration of his own judgment—at least he did not act on mine. He never asked my advice or judgment either as agent, attorney, real estate owner, citizen or friend, with respect to the proposed purchase. And there is an issue between Mr. Huntington and myself which your Honor must pass upon, as to whether I ever saw or had anything whatever to do with Mr. Huntington in 1869. But if he had come to me for advice, and I had advised and urged him to make the bargain with Tichenor that he did make, what was there in my relations with him or any of the members of this company to have made such action improper on my part, in fact or in law? I was not only then not in the receipt of any annual retainer from these companies, or from any of them, but I had not even then received the special appointment to settle the collision claims, so called, of the Western Pacific Railroad. I was as free, as unfettered, as unhampered by any obligation, legal, moral or equitable, as any man possibly could be, so that even had I done what Mr. Huntington claims I did do, my right to do so cannot be disputed. But as a matter of fact I did nothing of the kind, and the attempt to fasten that act upon me must be as futile in result as it is malicious in inspiration and beclouded in manner. As to the question of agency, in what passed between Stanford and myself when I accepted the employment of November, 1869, to attend to the collision claims, some light is thrown upon the issue, whether I had before that time accepted any general agency from him or from any of his associates. You are told of the negotiations that passed between us, of the terms that were made, of the different things that the defendant insisted upon, which are entirely inconsistent with the fact of existing general employment at that time. If I then had a general retainer from the company, as its attorney or as its agent; if I were in the receipt of an annual salary at that time as an attorney-at-law, and were required to attend to its business, would I have been making terms, and saying I must have this man or that man to assist me, or I would not undertake it? Would I say I must have the whole control of this matter, or I will not undertake the case? Was that the language of a man who was the general attorney or the general agent of a company, and was bound to attend to its business when it came along? Most assuredly not; and all these circumstances that are arising from time to time point with unmistakable certainty to the fact that no relation of agency commenced between any of the companies and myself until December 29th, 1870. When I say no relations of agency, I mean no relations of general agency.

Here the Court took a recess.

DOCUMENTARY EVIDENCE.

Mr. Cohen (continuing)—If the Court please, at the time of the adjournment I was discussing the evidence in reference to the transactions of 1869. Mr. Stanford, in sub-

stance, said that the papers passing between the company, not saying which company, and Tichenor, in 1869, were prepared by McCulloch & Boyd, and as they were not satisfactory, Mr. Cohen fixed them up. Your Honor will recollect McCulloch & Boyd, at this time, were the regular attorneys of all these companies, and the evidence shows that they were paid for their services, not only for drawing but redrawing the papers. The papers which were fixed up were produced here, first in duplicate; one set proves to be in the handwriting of Mr. Ryan, a clerk of the plaintiff, and the other set in a strange handwriting, not that of myself, or shown to be in the handwriting of any person in any way connected with me. Then a triplicate copy was produced, also in Mr. Ryan's handwriting, but why the triplicate was made does not appear. Now the copy in this strange handwriting was handed from time to time to the different witnesses. It was shown to Mr. Stanford; it was shown to Mr. Crocker; Judge Robinson saw it; all of the parties connected with the plaintiff's side of the case, saw it, but not one of them said whose handwriting it was. They did not positively say they did not know this handwriting, but not one of them ever said whose handwriting it was, and the matter was left so that it should be inferred, among the cloud of other suspicions which have been raised in this case, that this was a handwriting which was known to the defendant and was not known to the plaintiff, its officers or any of its witnesses. It seems to me, that, in addition to leaving it in that deceptive and confused manner, so as to deceive the Court; they have also deceived their learned counsel. I assume that they have not told him whose writing it is, and that by the questions he put and the statements he made, he did not know. I am sure he did not know, because if he had he certainly would not have left the matter in the position in which he did by his questions, to have it inferred that it was the handwriting of some one that was connected with my side of the case instead of his own. I say I am sure counsel would not have done that. I said nothing about it, because I happened to recognize among the correspondence we put in here that one of the letters addressed to myself was in the same handwriting as this mysterious copy, and I call your Honor's attention to the fact that the handwriting of this third contract, or this second copy of the contract of 1869, is in the handwriting of a person spoken of by Mr. Brown upon the witness stand, as the assistant secretary, assistant clerk or assistant bookkeeper of the Contract and Finance Company, James H. Moore. Your Honor will see by comparing a letter, written by James H. Moore, on the 27th of November, 1872, that the body of the letter and this contract of 1869, the handwriting of which was not recognized, are precisely the same. [Mr. Lake passes the papers referred to to the Court.] And on turning to the papers of 1870, which are annexed to the same bunch of papers which you now have in your hand, your Honor will see that the contracts of 1870 are in the same handwriting. But to help out the case Mr. Ryan comes here and swears that he copied the papers from a draft that was furnished by myself. I submit, that if this point were vital or even important in the case, it fails tested by all known rules for the examination of evidence, it utterly fails to establish that which is sought to be established. It fails if uncontradicted, and surely it fails when brought in conflict with all the other evidence in the case.

The counsel said in his opening that Mr. Cohen acted in the beginning, in the middle and in the outcome of the negotiations for the purchase of Block 9. I challenge the counsel for any proof that I had any part whatever in the negotiations of 1869 that resulted in that lease and the optional purchase, except the unsupported, and I will say right here, the utterly worthless statements of Mr. Huntington, to which I will call your Honor's attention hereafter.

The counsel has had much to say about my relations with Mr. Stanford, and the constant intimacy and kindly feeling which existed between us, and I am bound to say that his statements were correct; but the conclusions which he deduces from those relations are extremely erroneous. I know Mr. Stanford quite as well as the learned counsel does, and have had occasion to defend his acts and his policy quite as often as the learned counsel, and perhaps oftener, and I know this, that no she-lion defending her whelps, or a bear her cubs, will make a more savage fight than will Mr. Stanford in the defense of his material interests. I am free to admit that but for the interference of interested parties there never would have been any quarrel between Mr. Stanford and myself, but I fail to perceive in Mr. Stanford's conduct towards myself, after our differences had arisen, any evidence of that kindness of heart which the counsel has so eloquently portrayed. Nor have I seen any aversion on his part to the progress of this suit. On the contrary, I have seen him with the gleam of magignant feelings in his eye, sitting by the side of his counsel from day to day and from week to week, bringing all the powers of his great mind to bear upon this case, and furnishing suggestions, so that each circumstance should be availed of to the utmost for the attainment of his wicked purpose; that he might succeed in fixing a stigma of disgrace upon one whom he knew to be entirely guiltless of the charge he was endeavoring to maintain.

It is not correct to say that Mr. Stanford unfolded to me the plans and purposes of his railroad companies. Undoubtedly, after I became connected with his company he did to some extent; but it is not true that he gave me any information, of any nature or kind, concerning his purposes prior to the purchase of Block 9 in 1868, from Mr. Tichenor. Nor would it have been proper or natural that he should do so, for our interests prior to August, 1868, were somewhat of an antagonistic nature. I knew that the bringing of his road to Oakland was a menace to the property which I then owned; and certainly he on his part knew that he must either buy my property or assume a hostile attitude by starting an opposition ferry. It is therefore not at all probable that he ever unfolded any of his plans to me at that time, and he did not. When our interests became more identified, he, to some extent, gave me his confidence and asked my advice; but this was more than two years after the purchase by Ralston and myself from Tichenor; and I take this occasion to say, without any fear of contradiction from Mr. Stanford or anybody else, that no instance can be mentioned where he was ever led astray by following the advice I gave him. Certainly, if I had been at any time disposed to take advantage, for my own profit, of information received in a fiduciary capacity, the result would have been somewhat larger than having now a cause of action against Mr. Tichenor to recover some three or four thousand dollars, which is all that this purchase of Block 9 amounts to, so far as I am concerned. I say again, sir, that I have known Mr. Stanford long, and I have known him well. He has many good qualities, but I never made the mistake of regarding him as a perfect man.

Governor Stanford is a man of large affairs—a man whose transactions since 1869, in connection with the railroad companies, may be numbered by the tens of thousands. I can understand how it is that greatly interested in the result of this case, not on account of any money supposed to be involved, but because of the angry feelings inspired; I can understand how he should first desire to recollect something that might help out this case, and after looking over the papers and hearing the statements of Ryan, and remembering, perhaps, that it was about that time that he was accustomed to talk to me about railroad matters, he finally concluded that he did recollect it, and then he was entirely sure that he recollected it, and finally he came here to swear that

he recollected it. Now, I have said, and exception has been taken to it by the counsel in his argument, that Governor Stanford is a man of uncertain memory, and I propose to cite to your Honor evidences to support my views of the unreliability of his memory. Your Honor will recollect a letter that was read here from Governor Stanford to myself. It is as follows :

“ July 24th, 1874.

“ *Dear Cohen :* Regret on your own account that you are so ill. Send Mr. Yost over particularly to report, and carry this message. Michael Reese is willing to commence suit as stockholder. Please transfer to him 150 shares of your stock in the California Pacific. Hoping to hear a more favorable account of your health, I remain, yours truly,

STANFORD.”

Your Honor will bear in mind that it is also in evidence, that this letter refers to a suit that was commenced by Michael Reese against Milton S. Latham and others, a suit that attained some notoriety in this community, and that Mr. Stanford, within a few days after writing this letter, was so entirely oblivious of the fact that he had written it, or that he had taken any part in the transaction, that he said to Mr. Latham and his counsel that he was extremely sorry that the suit had been commenced, and it should not have been if he had known anything at all about it.

Mr. McAllister—How does that appear—that statement ?

Mr. Cohen—It appears in evidence ; and, further, as to Mr. Stanford's memory, I call your Honor's attention to question 348 of his deposition : “ I understood you to say heretofore that that contract was not made to the Central Pacific Railroad Company ? Answer—I do not remember that I said any such thing. Question 349—Was not the contract made with the company, mentioned in the papers which have been produced here, the Contract and Finance Company ? Answer—I do not know which contract that letter refers to. There was a contract with the Central Pacific Railroad Company and one with the Western Pacific Railroad Company, and one with the Contract and Finance Company, but which one that refers to I do not know.” Now, your Honor knows perfectly well that there was no such contract with the Central Pacific Railroad Company. Mr. Stanford thought there was, undoubtedly. That is another instance of his weak memory. I will give you further proofs. [Reads questions 67, 68, 69 and 94 of deposition.] Now, these questions refer to the schooners *Elko* and *Truekee*. It turned out when we came to examine Governor Stanford upon the subject, instead of the schooners being built on Block 9, they were built one and a half or two miles away on some property belonging to Mr. Tiernan, and he does not recollect whether the steamer *Thoroughfare* was built upon the property before or after they took the election of purchase. Counsel has read here the letters of the 11th of July, 1870, which show that the building of the steamer *Thoroughfare* could not be commenced until some arrangement was made for getting the use of one of the ways upon the property, and that was only a few days before Mr. Stanford, on the part of the Contract and Finance Company, informed Mr. Tichenor that they would exercise their option and would take the property at the price named in the papers of 1869. Now I shall point to a great many other instances of the failure of recollection and the confusion of dates that Mr. Stanford has fallen into, and I do not say, and am not undertaking to say, that they were at all intentional. I merely call your Honor's attention to these things in support of my assertion that Governor Stanford has an unreliable memory. And I also call your Honor's attention to his positive statement upon cross-examination here—I will not stop to find it unless the counsel desires—in which he says, “ I have learned to distrust my memory.”

This gentleman, Governor Stanford, is a peculiar man. He is a man of coarse fiber and strong nerves. He is not so entirely unconscientious as those by whom he is surrounded, but he is a man who never lets "I dare not wait upon I would." If he has doubts he considers them and considers them well—he gives his own interests and desires the benefit of the balance; he resolves his doubts, and when resolved he doubts no more, but goes forward with cold and brutal courage to carry out his conclusions. He has doubtless been advised by some of his standing attorneys that it was his interest to believe that I fixed up the papers of 1869, and I suppose that by this time he does believe it. His is not the careful and sensitive nature that fears to do positive injustice, that hesitates and considers, that decides with a reservation and asserts with a qualification. Once he has said, he has said, and the Rock of Ages is not firmer. Once he elects to recollect one transaction out of ten thousand occurring within the last seven years, then he does recollect it; not like his clerk, Mr. Ryan, "by an association of ideas;" not with an "if" or a "but" or "peradventure," but boldly, without explanation and without qualification.

THE EVIDENCE OF RYAN.

As for the evidence of Mr. Ryan.

"I should myself offend

If I did time expend with such a snipe."

Here is a clerk, who has probably copied from five to ten thousand papers for his employers; a copyist, whose labor is purely mechanical; who neither comprehends nor is interested in the transactions to which reference is made in the papers he copies, and yet filled with superserviceable zeal for his employers, anxious to promote himself in their esteem by some act outside of the scope of his ordinary duties, he swears that a paper copied seven years ago was from a draft in my handwriting. When cross-examined he does not, like his superior, content himself with saying with brutal directness, I recollect because I recollect. He thinks it necessary to give a reason, and his reason is, he remembers by association of ideas; he remembers by association with the last clause of the paper, and that last clause is one that can be found in every contract that ever was drawn up in England or the United States, and reads: "In witness whereof the parties hereunto have set their hands and seals the day and year first above written." That is the clause that causes him by association of ideas to remember. There is object memory for you with a vengeance. There is association of ideas, such as would have caused Abercrombie to issue a new edition of his work on Intellectual Philosophy, and made Locke's "Essay on the Human Understanding" pale its ineffectual fires. Such evidence as that of Ryan is the low comedy, the very farce of perjury. Would such a witness testify to anything that would help his master?

"Would his tongue lie for him?

His hand beckon? Or the fingers

Of his hand open and shut at his bidding?

Would he walk, run, jump?

Do anything that is most easily done?

He'd as soon swear,

I do protest against his oath."

When your Honor considers that confessedly I was not acting in 1869 for the plaintiff or the Western Pacific Railroad Company in any general capacity whatever, nor in any special capacity that included any such duty as "fixing up" unsatisfactory papers, prepared by its regular attorneys, it is impossible that you shall believe that I

did fix up, as Governor Stanford terms it, these papers. But even if we concede for the sake of the argument, and for the sake of the argument only, that I did fix them up, I am still at a loss to comprehend on what principle of reason or authority I should thereby be charged with fraud, or with wronging the plaintiff out of anything whatever. An officer of the plaintiff—Mr. Huntington—makes a bargain with my secret trustee, if you please, for a piece of land. He makes the bargain without any consultation with me, without solicitation or advice from myself, and when the terms of that bargain, so made, are reduced to writing, it is said that I, at the request of another officer of the plaintiff fixed up the writing. If it was true, what of it? It is not asserted that I altered the papers, or that I enlarged, diminished or changed the terms of the bargain between Huntington and Tichenor. Where, I ask, is the agency? And if an agency, is the act charged within the scope of that agency? Where is the fraud? Where is any loss or damage to the plaintiff? But we get some light as to the working of Mr. Stanford's mind when he undertakes to say that I interfered in the papers of 1869, by following his testimony, not only in his depositions, but in his oral testimony. At question 50 of his deposition he is asked: "By the original contract you mean the contract by which you took the privilege of purchase? Answer—No; I mean the original lease, with the privilege of the purchase." Mr. Huntington was going East and told me what had been done, and wanted I should look out and see the thing was fixed up. My recollection is, I went to Boyd & McCullough to have the papers drawn, and they were drawn.

"Q.—Those are the papers you speak of as being in the possession of your company? A.—Supposed to be in the possession of the company. I have an impression, I am not sure, that the defendant went over to Wilson & Crittenden to have the papers drawn; it is my impression." Now turning to page 1,553 of the testimony, the witness says:

"Q.—You say that was in 1869? A.—That the contract was not satisfactory to Mr. Tichenor, and the matter hung along some time, and then I requested you to attend to it. I think you drew a draft of the contract in pencil and read it to me. There is also an impression in my mind that Wilson & Crittenden had something to do with that contract, but you had to attend to it.

"Q.—Was that the contract for the privilege of purchase? A.—Yes, sir.

"Q.—And you say that contract of 1869 was, according to your recollection, drawn by the defendant? A.—Yes, sir.

"Q.—Well, why, if McCullough & Boyd were employed in it, was it taken out of their hands? A.—They made one or two efforts to draw it and didn't succeed to Mr. Tichenor's satisfaction.

"Q.—And you are sure that was in 1869? A.—Whatever time those papers were made"—at page 1,556.

"Q.—Were those the papers that were drawn up by Wilson & Crittenden? A.—I am not sure, but Wilson & Crittenden got them up, but I have some way an impression that they had to do with them.

"Q.—But don't you think you are confusing the papers of 1869 with those drawn in 1870? A.—No, sir; because I know that was because of the failure of the papers that was drawn by McCullough & Boyd; they were not satisfactory to Mr. Crittenden."

That was corrected; he meant Mr. Tichenor.

Now, your Honor will see from these answers of the witness that he is certainly confusing the papers of 1870 with the papers of 1869. It is in evidence here that Wil-

son & Crittenden drew a draft of the papers of 1870, and that I had some negotiations with them about them, but that they had nothing whatever to do with the papers of 1869. And further, at question 18 of the deposition: "You are under the impression, then, that the lease was in writing? A.—My impression is that the lease and a contract of purchase were all in one paper." At question 33 witness is asked: "You speak now of the first papers that were executed? A.—Yes, sir; the only papers I have any recollection of."

Your Honor will recollect that the contract of 1870 was all comprised in one paper, but the papers of 1869 were necessarily two. The transaction of 1869 was a lease of one-half of the block to the Western Pacific Railroad; and an option to purchase given to the Contract and Finance Company. When the witness says, in answer to these two questions: That the papers he is speaking of were all one paper, and those are the only papers he has any recollection of, it must be very evident to your Honor's mind that he speaks of the papers of 1870. These answers of Mr. Stanford's show that the papers which were fixed up, as he terms it, are the papers of 1870, and not those of 1869. But what was done with the papers of 1870? They were prepared by Wilson & Crittenden to suit the views of the railroad company, or some member of the railroad company, who was probably acting in the dual capacity as a director of the railroad company and a director of the Contract and Finance Company, but there was no change whatever made in the transaction except to change the times of the payments. As has been proven here, Mr. Ralston was contending for as much ready money as could be had, and the purchasers wanted as much credit as the vendors were willing to grant. From the 15th day of July to October 20th the negotiation had been dragging its slow length along, until every one was tired of it, and to save further delay, as Governor Stanford, in his answer to question 99, says, "you undertook to take hold of it, and have it closed up." That is the fact with reference to the papers of 1870. The matter had been pending for a long time, and I did then in conversation with Governor Stanford, as the evidence shows, undertake to take hold of it and have it fixed up. As the evidence also shows, I had been urging Ralston, who was the one that controlled all the matters in relation to that property under the declaration of trust of 1869, who was the only man that had the right to speak on the part of the vendors, to accede to the wishes of the purchasers, and I also undertook to furnish him with any amount he might require of the payments that were delayed. There are several other matters in the telegrams and letters that have been produced here, to show that the testimony that Governor Stanford has given, conceding it to be true, reliable and correct, so far as his intentions go, must have alluded to the papers of 1870, and not to those of 1869. We have put in evidence two telegrams, both of them dated October 20, 1870, from Governor Stanford to myself. The first one says: "I see that you provide in the contract for payment of interest at the rate of one per cent. a month. If so, we take the marine railway." The answer to that is in evidence: "Ralston says that was not the contract, but you can have it so." Then, on the same date, another telegram from Stanford, in which he says: "I see that the contract that you have drawn does not provide for our possession. I will draw it to cover that." Governor Stanford says that he knows he saw a draft of that contract, and he did see a draft of that contract, but your Honor can see it was the contract of 1870. He had that draft before him when he was sending those telegrams, two telegrams on the same day, discussing the terms of the draft which had been submitted to him for his approval, if I recollect rightly (the counsel can correct me if I do not). I will not stop now to look up the telegrams; the answer to the second telegram also

brought in Mr. Ralston's name: "Ralston says he will give you a separate covenant for the possession." But Mr. Stanford said here: "I never knew that Mr. Ralston was in any manner connected with this property until the matter of the assessment arose, which I believe was in 1872." Of course, when the telegrams were shown him on the stand, and he was asked to explain them, he did not explain them, as I expected he would, and say, "I am mistaken." It was natural enough that he should be; the wonder is that he comes here and undertakes to recollect any of those transactions. He does not say, "I am mistaken," but he makes an explanation which I can say, even in the adverse position in which I am placed, somewhat surprises me. He says: "Well, that made me think Ralston was acting as a friend of Tichenor, and undertaking to give that covenant on Tichenor's account and not on his own." Your Honor can see from the facts that I am pointing out, and they are accumulating as I progress, that, admitting the statements of Governor Stanford in this respect to be true, that his recollections refer to the transaction of 1870 and not of 1869. What could there have been in the papers of 1869 that could not have been made satisfactory to Mr. Tichenor, as Mr. Stanford states?

The transaction had been agreed upon between Huntington and Tichenor, and Stanford says, in his deposition, Huntington made him a memorandum of the contract, or that he, Stanford, made the memorandum from Huntington's dictation, and he took it to McCullough & Boyd to have papers drawn. We find that this firm, eminent in their line of business, noted for their care and accuracy in all matters relating to the real estate business, who were the regular attorneys for the railroad company, attended to the transaction, and they collected a bill for drawing and re-drawing the papers, and if there had been anything that was unsatisfactory about the second drawing, undoubtedly gentlemen of their talent could have accommodated themselves to the circumstances of the case; there certainly was ability enough in this firm. General McCullough had been Attorney-General of this State, and his partner, Mr. Boyd, had been in the business of advising as to real estate for many years, although the learned counsel asked him how long he had called himself a lawyer. He was a man, certainly, who was equal to the emergency of drawing a lease and an option to purchase of a piece of real estate. I say, why should it have been withdrawn from their hands? If there had been any dispute between the parties, could it not have been settled without calling in the firm of Wilson & Crittenden, or any one else, to draw these papers, about which there was nothing very extraordinary? I say, therefore, that it is almost certain, and that the facts point conclusively to the conclusion, that the papers drafted by the defendant were those of 1870, which he copied from those engrossed by Wilson & Crittenden, and which have been produced here, but which were not satisfactory to the railroad company, because it wanted more extended terms of payment, and then when those papers went to Sacramento they came back re-drawn, every part of them redrawn, except the resolution which was adopted and signed by the Contract and Finance Company, which is in the handwriting of myself. Now, if I drew the papers of 1869, if I had anything to do with them, certainly there would be some evidence of it. Your Honor has seen that every old closet, box and drawer, and every receptacle for papers of this railroad company has been ransacked; everything has been brought here; every little private note passing between Governor Stanford and myself or Mr. Crocker has been examined, those relating to the most trivial circumstances, to social relations and family affairs, and the counsel says he put them in to show the relations existing between the parties; but when we do the same thing to show the relations existing between the parties, he oppresses and weighs us

down with a quotation, I believe from Horace, that we are losing sight of the object of the lawsuit to declaim of the prowess of Hannibal. I say, if there had been any such transaction in 1869, there would have been some vestige, some paper, some trace of it, as there has been of every other transaction that ever took place between the parties to this controversy during the whole term of their connection, commencing in August, 1868, to the present time. This transaction of 1869 is the only one concerning which they have not been able to bring some written evidence, and if it be not deemed conclusive it is certainly a fact going to show that I am correct in my recollection, that those papers that I had to do with were the papers of 1870.

Now there is only one hypothesis upon which the demand of the plaintiff in this action can be sustained, and that is that it has a right to the services in all capacities of those whom it employs in any capacity ; that it has a right to receive the benefits of any investments they may have made before entering its service. Upon this hypothesis if one of its conductors or brakemen, before entering its service, should buy a lot near one of its depots and likely to become necessary or desirable to it and the company should subsequently purchase that lot at an advance to the brakeman, it could make a demand for the profit which he may have made on his investment. There is still another hypothesis upon which the defendant might have had a case. If it had employed me in 1868, before the purchase was made by Ralston and myself from Tichenor ; if I had been employed then as manager or advisory agent of its department for the acquisition of land, and it had instructed me to negotiate for the purchase of Block 9, and then while so employed I had arranged for the purchase from Tichenor, thus conspiring to make the company pay more for the land than it was really worth, or a higher price than it could have been purchased for, upon such a state of facts I say the plaintiff might have had a case.

This was the case it originally attempted to establish, but its witnesses lacking either the intelligence or the unscrupulousness necessary for the purpose, it was compelled to abandon its original position and amend its complaint. That remark does not do justice to the subject. Amend its complaint, do I say? Why, the practice that has been adopted by the pleader in this case might, by a mixture of mining and legal terms, be called prospecting practice. The plaintiff and its counsel have been sinking shafts ; have been running drifts in every direction and have amended its complaint at every turn. They have worked from the wall rock to the hanging rock ; they have reached and penetrated the bed-rock and there is no pay ore anywhere. What its next amendment will be after we finish our argument no man living can say. It may so amend as to state its real cause, not of action but of complaint, and ask damages for losses and for disbursements to the extent of three hundred and odd thousand dollars, said to have been made in the Senate of the State of California last winter to offset my efforts on the question of railroad fares and freights.

The issue upon which we are offering our arguments to your Honor at this time is very different from that which we came into Court to meet. The first complaint and the second and third charge that the purchase of this property had been made by myself at the request of the plaintiff, I then being its agent, and that it was purchased for the sum of \$200,000, but that Tichenor and myself, conspiring to defraud the plaintiff, the sale was reported at \$250,000, by which the plaintiff was damaged to the extent of \$50,000. Now, the issue has been changed by the fourth amendment, made after the plaintiff's evidence was all in and the motion had been presented for a non-suit, and it now is : Whether at the time the plaintiff itself made the purchase, I was its agent, and had an interest in the property, concealing that

interest, and induced it to buy at a price above its value. The counsel says that is the issue that is made by the evidence, and not by the pleadings. Perhaps so. I must confess that I shall have to leave it to your Honor to decide, if you can, what issue is made by the pleadings.

And I desire to call your Honor's attention to my statement which I make upon the evidence of the plaintiff's witnesses, that at the time the first, second and third complaints were drawn, the plaintiff and its pleaders knew that the cause of action, as stated in those complaints, could not be maintained by the evidence that it proposed to offer. Tichenor, the main witness, tells you that he had been interviewed by Crocker, Robinson and Sanderson. Crocker says in his deposition that he had fully stated all that Tichenor told him to Robinson and Sanderson, and he said here that Tichenor's statement was substantially the same as his testimony given here. Miller, the man who swore to the complaint, says that he obtained the information from Robinson and Sanderson. General David D. Colton says Tichenor had told him substantially the same as he testified to here, and that he (Colton) told it to Stanford. Hopkins does not seem to have had any knowledge of the subject at all, but as Crocker tells you in his deposition, he voted to commence the suit. And so the testimony shows these three principal conspirators, Crocker, Colton, and Hopkins, with their two hired men, Robinson and Sanderson, were putting their heads together in a back room of the railroad bastille on Fourth Street—that bastille in which they had for months held in illegal durance the body of John Miller, until, as has been said by my venerable associate, Judge Lake, in pursuance of some sort of an extradition treaty existing between the Government of the Central Pacific Railroad Company and the State of California, he was surrendered to the officers of the State; I say these persons, thus assembled for the purpose of conspiring to blacken and destroy the character of a man with whom for years they had maintained the closest intimacy, but with whom they then had a business difference, instruct their attorneys to commence an action upon a charge which they knew and their attorneys knew to be false in fact. A complaint upon the facts they have endeavored to show here, would not have been sufficiently sensational; it would not answer the purpose, which was to destroy my influence with the Legislature and prevent the passage of the Archer bill to regulate fares and freights in this State; and so this ex-Chief Justice of our young, beautiful and noble State, who did more while on the bench to distort and confuse all well-settled principles of law than any man that ever sat upon it, and who seemed to think that graphic rhetoric and nervous diction would atone for a misrepresentation of elementary principles and a want of knowledge of all law—this man, who at this time was representing the plaintiff off the bench, deliberately sits down to draft a complaint, overflowing with rhetorical billingsgate, and avers as facts that which he knows not to be true, and then procures his client to swear to his false representations. And, mind you, that he had not sufficient courage either to put his own name to these pleadings or to come here and defend them, but, like all assassins of character, he seeks immunity, oblivion and shelter behind the coward's covert until circumstances compel him to appear but for a moment on the scene, and to acknowledge that he drew the complaint and that he did it in haste. Why this haste? I was not about to leave the country; no provisional or conservative process was sought; even the ordinary summons was never served upon me, and it never was intended that it should be. The haste was that the Committee on Corporations was about to return the Archer bill to the Senate, and it was intended to destroy the influence of my arguments before the vote should be taken, and that

accounts for the false charges and the commencement of this suit with the indecent haste which Mr. Sanderson confesses.

But this is not the first time that this person has been rebuked for abusing the process of a Court upon a peurile bill which the Court treated as false clamor, as your Honor will see from the opinion of Mr. Justice Field, but recently delivered as presiding Justice of the Circuit Court of the United States, in the case of the *United States vs. Flint*, wherein the same Mr. Sanderson drew the pleadings in the interest of the corporation which is the plaintiff in this action, and disguised himself in the official robe of the United States District Attorney. Never before have I been so impressed as by the conduct of this legal hireling with the power of wealth to command the abasement of intellectual power. Truly, one may say to the plaintiff:

"You have among you many a purchased slave,
Whom, like your asses and your dogs and mules,
You use in abject and in servile parts."

But Mr. C. P. Huntington also offers evidence on the subject of Block 9. Mr. Huntington is the urbane member of the corporation. He is the Ephraim Smooth, the congressional operator, the legislative broker and financial manipulator of the great corporate Kraken. Mr. Huntington is the diner and winer of the Washington department of this devil-fish. Here let me digress a moment to recall to your Honor's recollection a letter written by Charles Crocker to the defendant, in September, 1873. Mr. Crocker was on the stand, and had said he did not think he had ever written a letter to the defendant in his life, or to that effect; I will not now take time to find the exact words. He also said he had never corresponded with the defendant in relation to his interests in the Central Pacific. I then introduced the letter from Crocker, in which he asks the defendant to send his, the defendant's, car over to Chicago for his use, and to send a good cook, and then goes on to state that he had repurchased his interests in the railroad which he had previously sold. The counsel sneered at that letter as a scrap of unimportant paper, which the defendant had preserved to show that Crocker had asked him to procure a cook; it is patent that the letter was not introduced for any such purpose, but the counsel could hardly expect those of us who have known him for the last twenty-five years to believe that he was sincere in underrating the importance of a cook and of a good cook. There is no man living who appreciates the services of a good cook more highly than the learned counsel himself. The sight of Mr. Crocker's well-fed person would convince anyone that the first great want of his life is a cook, and a good cook—that which Huntington wants only as an adjunct in obtaining Congressional votes or to restrain Congressional interference, Crocker desires for his own personal gratification. Both Huntington and Crocker have adopted for their motto the immortal lines:

We may live without poetry, music and art;
We may live without conscience, we may live without heart;
We may live without friends, we may live without books;
But civilized man cannot live without cooks.

He may live without books; what is knowledge but grieving?
He may live without hope; what is hope but deceiving?
He may live without love; what is passion but pining?
But where is the man who can live without dining?

Mr. Huntington possesses a memory like one of the rocking stones of the ancient Druids; the finger of a friend placed on the right spot can cause it to vibrate to its very center; but the battering-ram of a foe cannot move it one iota from its stolidity. Before a Congressional Committee, and in the witness-box, or in the taking of a deposition, Mr. Huntington is the representative know-nothing of the nineteenth century; he is a very centennial specimen. Mr. Huntington obtained his vast wealth from the Contract and Finance Company—of that pulseless, viewless, conscienceless, impalpable but affluent incorporeal monster, Mr. Huntington was a part to the extent of one-fourth. The Contract and Finance Company, composed of Stanford, Huntington, Hopkins and the Crockers, was in partnership with the Central and Western Pacific Railroad Company, composed of the Crockers, Huntington, Hopkins and Stanford. It was a partnership which resulted in the first corporation owning all the property, and the second corporation owing all the debts. The railroad corporation proper, the debt-saddled and curse-encumbered corporation still lives; it lives to elude Assessors, to debauch Legislatures, and to cower at the doors of Congress, seeking only immunity and oblivion. Once its cry was that of the daughters of the horse-leech, "Give! give!" Now its refrain is, "Let me alone! let me alone!" The other corporation, the Contract and Finance Company, the fence who received and disposed of the goods stolen by its associate, is, I suppose, no more. Its children, who had been enriched by it, finding that their father had outlived his usefulness, resolved to follow the Hindoo custom of plastering him with mud and setting him in the sun by the river bank to die. They were spared the labor of the mud-plastering—a just public opinion had already accomplished that for them. There was nothing to keep the Contract and Finance Company alive. It had stolen all that it could steal, and divided all the swag among its children. It had no worldly goods save an unsavory reputation, and so, on the 10th day of September, in the year 1875, at the City and County of San Francisco, in the State of California, on motion of Charles Crocker, by a vote of its members, it was resolved to put an end to its valueless life. At that meeting Mr. Huntington voted one-fourth of the whole capital stock of the Contract and Finance Company in favor of disincorporation. The Contract and Finance Company is, therefore, I suppose, no more. Its skeleton will, during the lifetime of its heirs, continue to swing upon the gibbet of public opinion, and its deeds will be preserved in the history of malefactors along with those of Jack Sheppard and Captain Kidd, but it has gone to its rest, and I will be mindful of the motto, "De mortuis nihil nisi bonum." But the curious circumstance to which I call your Honor's attention here, is that the affluent legatee, the bereaved orphan, the quadrilateral executioner of the Contract and Finance Company, the man who stood by both its cradle and its tomb, the witness Huntington, was only four months after its demise unable to recollect that it had ever lived, for on the 19th day of January, 1876, Mr. Huntington swore before a Committee of the House of Representatives at Washington that he did not know the names of any of the officers or directors of the Contract and Finance Company; that he scarcely recollected its existence, and only knew that it had gone out of existence because Judge Brown told him so. Why, if that poor, disgraced forgotten entity had been living and breathing it might have said, with Lear:

"How sharper than a serpent's tooth it is
To have a thankless child."

And yet the witness Huntington, who cries, *Non mi ricordo! non mi ricordo!* about an important event occurring four months before, is able to recollect with precision an inconsequent detail of a business transaction seven years old!

Mr. Huntington says when he came here in the Fall of 1869, he asked Mr. Stanford who owned Block 9, and Mr. Stanford said he didn't know—he had better go and see Cohen. That he went to Cohen, and Cohen told him Louis McLane had an interest in the Block; afterwards that Ralston had an interest in it. That he then went with defendant to see Ralston, and they were informed by Ralston that H. B. Tichenor had an interest in it. Now I ask your Honor to bear in mind what Tichenor's evidence is in this case. I will, however, refer to it immediately. Huntington continues: Mr. Tichenor was then sent for and came into the Bank of California, where we then were, the defendant and myself. After some conference between all of us, Cohen, Ralston and Tichenor withdrew for consultation. Says Mr. Huntington: "After some conference between us, Cohen, Ralston and Tichenor withdrew for consultation, and when they returned Cohen told me (Huntington) that we could have the property for \$250,000." I didn't know that Cohen was interested. Your Honor, of course, recollects that we do not admit that any such interview ever took place. But for the purposes of this review I am treating Huntington's statement as true. I say that the interview did not take place, but I assume, for the purposes of this review, that it did take place; and, if it did, it carries upon it a complete refutation as to want of knowledge on the part of Mr. Huntington. Side by side with his assertion that he didn't know that Cohen was interested, joined, as it were, with this statement, and marching with it to the locked step of the convict, comes the other statement that Cohen, Ralston and Tichenor withdrew for consultation. If Ralston and Tichenor were alone the owners and I was representing the purchaser, would I not have remained with Huntington? Why should I have withdrawn with the sellers for consultation? Why withdraw at all? And if there was any such withdrawal, if that interview did take place, as Huntington says, and Ralston and Tichenor and myself went apart for consultation, is there any man in his senses, conversant with business affairs, who would not by such a withdrawal have received notice that I was one of the sellers, and that I was interested in making the sale? It certainly never would have been assumed that I was an agent of the purchaser, the purchaser then being present in the room. It would not have needed a man of Mr. Huntington's national reputation for shrewdness to have deduced any such conclusion. But, in point of fact, no such interview as is spoken of by Mr. Huntington ever took place in 1869, and if there was any such interview in 1870, as is not at all improbable, from all the circumstances of the case, your Honor can readily see, such interview in 1870 could only have reference to the times of the payment, which the purchasers of the Contract and Finance Company and the Railroad Company desired to make more favorable to themselves than the terms provided in the contract of 1869. Now I come to consider the other portions of Mr. Huntington's testimony. Mr. Huntington said here that he recollected when he came to San Francisco, in the summer of '69, very large improvements being made on Block 9, and that the improvements that had been commenced, and those which were contemplated, would have cost \$500,000. That is a very safe way to testify, certainly, *those which were contemplated*; he didn't say by whom or how. The improvements commenced or those contemplated would have cost half a million of dollars. As I said this morning, a lease had been taken for a portion of the water front from the Harbor Commissioners. Your Honor had that diagram before you and saw the limited, circumscribed space upon which that slip could have been constructed. The testimony and the diagram that have been exhibited by counsel for plaintiff shows the condition of that property even up to 1870. It shows that before this time spoken of by Huntington, in October, 1869, a very immaterial portion of Block 9 had been

touched in any way. I think the testimony goes to this extent that the only use made of it was the cutting off of a portion of the front by reason of building the slip in front of it, and passing over one corner of it, Second Street at that time not having been planked and filled in. And then there is another fact.

Rent was paid for that portion of Block 9 which was used in conjunction with the ferry slip, Tichenor made a demand for a rental of \$200 a month. This was referred to the Committee of Directors of the railroad, and it was cut down to \$150. That was regarded as a fair compensation and was paid. Now upon such portion of the block as Tichenor would have allowed to have been used for \$150 a month, could there have been any such improvements projected as would cost half a million of dollars? This was in 1869. The bill of Tichenor was rendered in 1870, when certainly very large improvements had been made by the Western Pacific Railroad Company, after they took possession of the ferry slip, after the Western Pacific was built to Oakland, and they were running their cars from Oakland and Alameda to San Francisco, and landing them at Second Street. As I said before, we show to your Honor from the books, that this account, this enormous expenditure, this great, wide, yawning chasm, that had been opened to entrap the Western Pacific Railroad Company and the Contract and Finance Company and the Central Pacific Railroad Company, and these unsophisticated, green country boys, Stanford, Hopkins, Crocker and Huntington, into the purchasing of this property; that, with all the rhetoric and eloquence that the learned counsel has expended upon this topic, extending over a period of about ten weeks, it sums up to this and no more; that up to the time that Mr. Huntington arrived here, on the 18th September, 1869, there had been expended upon that ferry slip property, everything included, \$14,827.31. I do not know what knowledge your Honor may have on such matters. If your Honor ever had the misfortune to engage in business of that kind, you will come to the conclusion that \$14,827.31 does not make much of a showing; that you would not get much wharf building done for that amount. The Western Pacific commenced running in here in the early part of September, 1869. Prior to that time this ferry slip had been used, as is shown in the evidence, by the freight boats of the Oakland Railroad Company. The evidence also shows that before that ferry slip was built, a freight boat had been landing in the neighborhood of Davis Street, and had been paying a rental to the Board of State Harbor Commissioners, which was avoided by the building of this ferry slip. So that really it was a wise and prudent transaction and for the interests of the railroads to build that slip. From all the circumstances of the case, and from the letters that passed between myself and Judge Crocker, it will be seen that these improvements were favored by him because it was seen that it would afford a landing place for the freight business of the Western Pacific Railroad Company, and it has been used as such from that time to the present. In connection with the lot and that ferry slip, very much has been said about a shed that was built. The railroad engineer was brought here, and made a diagram of the condition of this property as he saw it on the 1st of January, 1870, about four months after it had been used by the Western Pacific Railroad Company. He tells you that he went on the property, for the purpose of taking charge of it for the Western Pacific, on the 1st of October, 1869. He is not asked whether that shed was there then. Of course, he was not; because it was not there. He is asked whether the shed was there on the 1st of January, 1870. He said it was, and he makes a diagram, showing the condition of the property, which shows the shed upon it. Well, the counsel has commented upon the enormity of taking the cor-

porate money and building that shed for the purposes of seducing the company into buying the property. Now, I refer again to the books of the Oakland Railroad Company, and we find that the first payment that was made upon that shed is a labor bill, paid on the 20th of September, 1869, and amounting to \$30; and so on, continuing week by week until it was finished. This shed that has figured so much here, and which it is said I put there to induce a purchase of property for \$250,000, seems to have cost altogether something like \$1,600 or \$1,800. That was the big shed; the great structure, which cost between \$1,600 and \$1,800, and upon which the counsel has done an amount of talking that will cost his client more than the shed did. I thought when the counsel first commenced his opening that there must have been some structure erected since I had anything to do with the property, something that would vie with Vanderbilt's Union Central Depot on Forty-second Street, in New York. I went down there, but did not find anything that looked to me like a very enormous structure. This is one of the trivial, insignificant circumstances in this case that has from time to time been brought in here, and upon which a pyramid of fraud was to be based. I think these figures presented by me from the accounts in the possession of the plaintiff are very conclusive as to the value of Huntington's testimony in respect to the value or extent of the improvements that were on that block. In the evidence given by him this expenditure of \$14,000 loomed up into an expenditure of half a million dollars, and he said that he was bound to stop it right there. Why, up to the time when Mr. Huntington went upon the property, I undertake to say that if, for the business done upon the wharf, the regular rates charged by the Harbor Commissioners upon any of the public wharves of the city had been paid, the amount would have nearly equaled the cost of its construction. I have alluded to the nature of the memory of Huntington, and I ask your Honor's consideration one minute to the character of his cross-examination. Now, sir, I appeal to you boldly and with confidence, whether you, sitting here impartially to judge between the plaintiff and myself, holding the scales of justice with an even and firm hand, neither inclining to the one side nor the other, whether, from what you saw of that witness on the stand, you would allow his testimony to affect the balance either way. I do not like to comment with any harshness upon the testimony of Huntington, because, after his examination, and just at the adjournment of the Court, he told me if this thing continued, if he was cross-examined here any more, there would be a coolness between us. I do not wish to produce that deplorable result; but I do say that, if, in the course of my limited experience, I ever saw justice not only tempered but diluted with mercy, it was when your Honor allowed him to leave the Court-room a free man, instead of sending him in charge of an officer to be examined by a magistrate upon a charge of perjury. I say that one of the most disgraceful incidents of this whole trial was this one man's evidence, the vice-president of this great corporation—the man who has been foremost in administering the great trust which the nation confided to himself and his associates—coming here, and, to question after question, swearing that he did not recollect facts which it was impossible, in the nature of things, that he ever could forget; and then when he is pressed, when the questions are coming thick and close upon him and they are getting to be decidedly inconvenient, what does he do? He turns around and replies by impertinent and flippant personal remarks. Sir, we have it from very high authority, that of no less a person than Mr. (afterwards Lord) Brougham, who was counsel in the celebrated trial of Queen Caroline; and he makes the remark about a witness whose want of recollection has become a matter of history, and who has immortalized and perpetuated a term which he used so many hundred times in the course of the testimony in that case: "Non mi

ricordo." That "nothing more surely discloses the testimony of a false witness than flippancy and impertinence in the manner of telling his story."

"A false witness is always flippant and impertinent when he is pressed." And that is just what Mr. Huntington was—I say that in this case, where more than money is involved; where you, sir, sitting as chancellor, are asked to determine whether the plaintiff in this case is entitled to a decree upon the ground of fraud; no reliance, not one particle, should be placed upon the testimony of such a witness as this man Huntington. I do not like to say anything that is harsh. I do not like to go beyond the bounds of decent and respectable language. I do not like to call men by opprobrious epithets, but I do say this, and hold myself responsible for it at all times and in all places, that if ever a witness left the stand with the brand of perjury indelibly impressed upon his forehead, that witness was C. P. Huntington.

The next witness was one I may best describe by borrowing these lines:

"Look, as I blow this feather from my face,
And as the air blows it to me again,
Obeying with my mind when I do blow—
And yielding to another when it blows,
Commanded always by the greater gust."

Your Honor, I am sure, will not fail to recognize in this description the appearance on the stand of Mr. H. B. Tichenor.

I hardly know whether it is necessary that I should occupy your Honor's time in comparing the discrepancies of the testimony between Mr. Huntington and Mr. Tichenor. But it is a somewhat important feature in the case, and I will do it briefly. Mr. Tichenor was the leading witness for the plaintiff in this Block 9 transaction. Mr. Tichenor was the only witness, as far as we know, not directly in the pay of the plaintiff. Mr. Tichenor, according to his own statement, has had business differences with myself—he has a claim against the estate of Mr. Ralston which he would like to collect from myself, and comes here to try and prove that he has somehow or other been guilty of a fraud in the matter of the sale of this Block 9, and has failed to convince anybody upon his own statement of his own turpitude. It is a maxim of the civil law that no man should ever be heard in a Court of justice to speak to his own turpitude. Mr. Tichenor is charged by the plaintiff in this action with conspiring with the defendant to defraud the plaintiff. Mr. Tichenor makes one statement to myself and my counsel, and a very short time after tells an entirely different story on the stand. Now I will, as briefly as I can, refer to Tichenor's evidence, and compare it with that of Huntington. In the argument of counsel, the other day, he said with some emphasis, and very positively, that Cohen instructed Tichenor to demand \$300,000 for the property. Of course, I do not hold counsel responsible for all the statements he makes in respect to the testimony. There will certainly some inaccuracies occur in commenting upon nearly 4,000 pages of testimony. Some mistakes will necessarily be made on both sides. But counsel was incorrect in his statement. He put this question to the witness, expecting to draw out something to suit him: "What did Cohen suggest to you, if anything, as to the price you could get from the railroad company?" Counsel suggested a great deal to this witness. The witness replied: "Well, I don't recollect that Cohen mentioned that. One or the other, either Cohen or Ralston, I think, suggested \$300,000." Huntington says he went to Cohen to see who owned the property, and that I told him Louis McLane had an interest in it. It is very singular that I should have sent him to McLane, as he was not in the country

at the time, and then I told him that Ralston had an interest. He went to see Ralston and Ralston told him that Tichenor was the man he wanted to see. Think of that for a minute. Here was a man treating another as an agent, having, as he claimed, confidential relations with him, allowing him to operate with and improve his property without his knowledge. When he comes to ask who the owner of this property is his agent tells him first that Louis McLane is interested in that property. Louis McLane is off in Baltimore, or Paris, or somewhere else. Then he draws out of his reluctant agent that Ralston is interested. He goes to see Ralston, and finds out that Tichenor is the man he wants to find. What would a shrewd man—such as Huntington has proved himself to be, except in the manner in which he testified, there not being much shrewdness in that, and there never is in any departure from truth—what would a shrewd man conclude? Would he not think that an agent who answered him in that way was trying to play him a double game? But Huntington's statement comes in direct conflict with Tichenor's. Huntington says I named the price to him of \$250,000. Tichenor, on the other hand, says he was told by either Cohen or Ralston to ask \$300,000. Tichenor says in his direct examination: "I don't recollect of having any interviews with Huntington in the presence of Cohen. He says Ralston told me I should have a one-fourth interest in the trade." There, of course, Mr. Tichenor is mistaken, because he already had that interest under the Declaration of Trust, and Mr. Eldridge and Mr. McLane both tell you that from the outset it was understood that Tichenor had one-quarter interest in the property. Tichenor also says: "I never told the company that the property was owned by Ralston and Cohen. I felt as if I was acting as a sort of agent or broker in the sale." Then the counsel puts one—I won't say one of *his characteristic* questions—but one of his questions. He has put a series of questions in the case not thought to be proper. He asks the witness: "Well, how was it about the concealment of this matter?" The witness says: "I don't know anything about the concealment of the fact that Cohen had an interest. I didn't know Cohen's position exactly." That does not agree with the first part of his statement, that he had sold me an interest and that he knew Ralston and myself owned it. He says: "It was understood between Cohen and Ralston that I was to make a business of selling the property. I suggested to them that one or both of them had better sell the property. They said the property was mine as it was in my name. I think the first price I named was \$300,000. I do not recollect having an interview at the Bank of California when Ralston and Cohen and Huntington were present. There again he directly contradicts the statement of Mr. Huntington. Then there was another of the leading questions put by the counsel. We have had them all through the examination of the witnesses, such as: How was it about Cohen's concealment of his ownership? When did you first learn that Cohen was receiving excessive rates of transportation? and questions of that kind leading the witnesses up to the point they were expected to testify about. This witness finally is asked the question: "In not stating to the railroad company about Cohen's and Ralston's interest, did you at that time consider you were carrying out their views?" Of course the witness would make but one answer. He says, "Yes, entirely." Then Mr. Tichenor gives his statement about this \$40,000. There is a great deal of Tichenor's testimony about this \$40,000, as your Honor knows, that is not consistent. But I did not object to this testimony, although it was entirely immaterial, for a very obvious reason—it was necessary for my sake that it should come in. It was stated in the opening of this case that when I received \$40,000 to be paid to Tichenor, I retained \$5,000.

Of course, after the counsel made that statement, I was willing that all the testimony that could be brought out on that subject should be produced. But I ask now, that it is all here, what relevancy has it to this case? The railroad company certainly have had credit for all the money it ever paid. It would not have lost anything if I had received \$5,000, or \$15,000, or \$50,000. It was credited with all the payments it made. It has been credited on this transaction with \$250,000. What business it has how any payment was disposed of as between Ralston, Tichenor and myself, the owners of the property, I cannot very well see; but it turned out, when the evidence was all in, that Tichenor and Ralston received the full sum of \$40,000. Mr. Tichenor, all through his cross-examination, undertook to make out that the payment of \$40,000, of which \$35,000 was paid to him on the 1st of November, 1870, was an advance payment by the railroad company. He says, on cross-examination, that negotiations between himself, Cohen and Ralston for the purchase of Block 9 were pending several months. They agreed to purchase it in July, 1868. It was charged upon his books August 1, 1868." Your Honor will see that all through the examination of this witness, from the very first, his statements were entirely outside of the facts, as they came to be shown when the papers were produced. Scarcely any statement of his can be reconciled with the documentary evidence or the testimony of other witnesses. When his accounts come to be produced, it turns out that they were rendered to Ralston just as long, he says, as Ralston was willing to receive them. He stopped rendering them, because he saw that Ralston didn't read them; but afterwards he says: "I accounted, at the expiration of each month, for the receipts and disbursements to you and Ralston." I refer to that to show the animus of the witness. When pressed upon that point, he said, I used to render the account to Ralston. Then he says: "I asked Ralston how he would have the deed made out and he told me to let that be; he would tell me. Ralston and Cohen were the only purchasers I knew of Block 9." So he continues to state all the way through. He tells you that up to the time the sale was made, in October, 1869, the only purchasers he knows of, in the whole transaction, were Ralston and Cohen; that he had no idea himself that anybody had any interest except Ralston and Cohen. Well, we cross-examined him on that and he stuck to it; denied ever having any interest at any time, until finally we produced the declaration of trust that was executed in January, 1869. It was signed by Ralston as trustee. The acceptance of it was signed by whom? By the witness himself, H. B. Tichenor, by myself, by McLane and by Eldridge. Well, that was the first the witness had seen of that paper; he didn't know anything at all about it. He supposed he must have put his name to it without reading it, and that was the first and last he ever saw of it. He tells us that Ralston was a very peculiar man. I suppose there is no doubt about that. He says he was in the habit of signing anything that Ralston told him to sign; that he put his name to that paper, and that was all he had to do with it, and that he didn't know when he made that contract with Huntington, in 1869, that he was interested in it, but that Ralston told him if he would make the sale he should have a quarter interest. He repeated that statement a great many times; that Ralston told him if he would make a sale to Huntington and the railroad company, he should have a quarter interest. Is it probable that Ralston, the trustee who had executed a deed of trust, which had been accepted in writing by Tichenor; that Ralston, man of business as he was, should have told Tichenor, "If you make a sale of the land, you shall have a quarter interest," when Ralston all the time knew that Mr. Tichenor had such interest, and that evidence of it existed in writing? Well, that statement remained until the trial

has been progressing several weeks, when among the papers of the California Pacific Insurance Company is found another declaration of trust, which had been deposited there by Tichenor, and Tichenor brings it here. This declaration of trust had been in his possession at the office where he keeps his papers, he being Vice-President of that corporation, and he tells you that he signed this acceptance of the trust because Ralston told him to sign it. He was not accustomed to criticise much what Ralston had told him to do; and that he had not seen it before or since. And yet it turns out that four copies of that paper were executed. He said further that he was over 21 years of age, and generally knew what he was signing when he did sign a paper. He says: I understand this paper to mean that I was one-fourth interest in the Mail Company purchase. [Reads from the reporter's transcript.] There has been a great deal said on the question, as to whether any deed of this property was made by Tichenor to Ralston or not. The declaration of trust certainly recites that such a deed had been made, and there was produced here a deed made by Ralston at the time the transaction of 1870, between Tichenor and the Contract and Finance Company, was consummated. Now if there had been no doubt, if there had not been an idea existing at that time in the minds of some of the parties in interest that there was a deed; why was this conveyance made by Ralston to Tichenor in 1870? The counsel says that paper is produced from the possession of Mr. Cohen, but what of that? True, it is found with the other papers relating to the property. But what of that? The fact remains that that deed was made at the time it bears date in 1870, as the acknowledgement of the notary shows. It certainly could not have been made after the commencement of this suit, because the hand that signed it has been powerless for a long time in death. There was evidently some purpose in the making of that deed at the time. Somebody must have asked for it. It was done as a matter of caution on the part of some one, and if there was not a suspicion at that time, or an impression that Tichenor had made a deed to Ralston, why was the deed taken from Ralston back to Tichenor? It must have been done for some purpose, although Stanford says he never knew that Ralston was interested until this assessment of 1872 came up. There is a charge in the bill rendered by Wilson & Crittenden for Notary's fees. In the letter written by Crittenden to myself about the title to Block 9 is a postscript in Crittenden's own handwriting: "The deed for Mr. Tichenor to sign is prepared and at my office." Take that and the charge for the notarial acknowledgement in that bill rendered by Wilson & Crittenden in connection with the search of title to the property and the deed back from Ralston at the time of this transaction in 1870, and you certainly cannot fail to conclude that there must at some time have been a deed from Tichenor. But the testimony of Tichenor's, as your Honor will recollect, is confused, contradictory and malignant. He first starts out with the proposition in regard to the transaction of November 1st, 1870, that it was a payment and that it was not a discount; that it was not an advance of money made by the defendant to himself and Ralston. He sticks to it until it is shown to him that it could not be so because he received interest on that amount from the railroad company until the time mentioned in their contract at which they should have paid the \$40,000, and when they did pay it; then for a moment he wavers; but he comes back again to it directly and says, "No, that was a payment." His attention was called again to it, and he says, "I don't care, that was a payment." Then the second time he retreats from that position, but he comes back again, and again is forced to recede. After going away at a recess of the Court, he comes back again in the afternoon, and he asserts again that it was a payment. So it was all through his testimony. The climax of that testimony

was, when he came here on that last occasion and was called in rebuttal, when he told you that the sales of property bought of the Pacific Mail Company, and upon which we had been basing some estimate as to the value of Block 9, were wash sales; that Cohen had charge of that sale, and that he went to the auction-room, and that when the property did not bring prices to suit him, he bid it in. We brought here Mr. Dore, the very eminent real estate auctioneer. Certainly he is as reliable a gentleman as there is in this whole community—probably one of the best citizens we have or ever have had in San Francisco. He tells you that Mr. Tichenor's statement is not true; that no property ever was bid off by me, and that all the sales, so far as he knows, and, in fact, all the sales, were bona fide sales; that there was an objection made about some property, knocked down to a Mr. McCarty; but that was because McCarty or his counsel objected to a clause in the deed taken from the Pacific Mail Company. But, to the end, Tichenor shows malignity about his testimony and a persistency of purpose to asperse the defendant and connect him with some wrong-doing—with something that should not have been done. I say his statements all the way through were contradictory. Now, after Mr. Tichenor had said here all that he could to help out the plaintiff's case; after he had failed to obtain a conviction against himself upon his own confession of a fraud he never committed, he suddenly recollects that in an interview had with myself previous to the commencement of the trial, I had endeavored to seduce him from his allegiance to the railroad company by offering him a loan of money for the purpose of engaging in a grain speculation; and he skips up to the plaintiff's counsel to inform him of the fact. Well, the counsel questioned me on the subject and was either satisfied with my explanation, or he did not wish to subject his witness to the ordeal of a cross-examination, for he did not examine him as to this insinuated bribery. It is an accepted axiom that only persons, either male or female, whose characters are somewhat dubious, are ever improperly approached. No man who is thoroughly honest, and no woman who is perfectly chaste, ever receives improper solicitation. When such are made, there is always a cause, however slight. As was written by a very eminent lady:

"In part is she to blame, who has been tried;
He comes too near, who comes to be denied."

The Court then adjourned until next morning.

TUESDAY, October, 10th, 1876.

Upon the opening of the Court Mr. Cohen continued his argument as follows:

If the Court please, without for a moment conceding that the question of the concealment, if there was any concealment of my interest in Block 9, is at all pertinent to this case, or cuts any figure in it, I propose to show that it is not at all likely, and, in fact, your Honor cannot, upon the evidence, come to the conclusion that there was such concealment. It is not at all probable that the interests of defendant in Block 9 could have been concealed from Mr. Stanford. As the counsel said in his opening argument, in a case of this kind you must look at probabilities. Why should it have been so? Stanford tells you in his testimony that he rode with me over that part of the city in which this property is located, and that I told him of my interest in the adjacent property, the property adjoining this Block 9. If I told him that, and he says that I was trying to sell him the adjacent property at the time that I told him, why should I have suppressed my ownership of this particular property? I told him of my interest in all that he did not buy, that I was trying to sell him, but he says I did not tell him of my interest in this one piece. Now, what possible motive could

there be for not doing so? Will it be contended that if Stanford had known of my interest in that property, he would not have bought? He tells you to the contrary himself. He says, if he had known that the defendant had an interest, he would have treated with him directly, but it turns out Mr. Stanford was not the party that made the negotiation. He says in his deposition: "I never came in contact with anybody about this Block 9 until after the negotiation had been concluded between Mr. Huntington and Mr. Tichenor, and, Mr. Huntington being about to leave for the East, he gave me a memorandum of the terms he had agreed upon. Is it at all likely that if he had known that the defendant had an interest in it, that he would not have bought the property? He tells you to the contrary, because he says in his deposition, at question 62, "We knew we must have that property."

If Mr. Stanford had not left this State pending this trial, and we had been enabled to put him on the stand as we contemplated in our case in rebuttal, and to have examined him upon the report which he had made to his Board of Directors and the Chief Engineer of the company had made to himself upon this very purchase and the importance which it was to the company and what they were doing with it, we should have made these things very much more manifest to your Honor, but I am satisfied that they are manifest enough. At question 102 he says: "We never did doubt much at the time of the contract that we would make our election to purchase because the block seemed to be very necessary to us." Now you are asked to believe that if Mr. Stanford had known that the defendant had an interest in this property that he would not have purchased it, and that he did it under the advice of the defendant, who concealed his interest, that he relied upon the advice given him, and thereby was made to pay a price more than the property was worth. But Mr. Stanford, all through his deposition, carries out a contrary idea; though at the close of his testimony here, when he came up in rebuttal and when he had seen through the case, and had got an idea of the scope of it, and what the issues were that were involved, he did not testify in the same strain. But at the commencement of this action, and within a few days after it had been commenced, he gives this testimony. Now, calling your Honor's attention, not only to that proposition, but to illustrate the inconsistencies of Mr. Stanford's testimony, I will read from page 1,241, line 29, in answer to the question of counsel as to what knowledge the witness had as to the improvements on Block 9 previous to the purchase from Tichenor. He says there were some improvements over there, or contemplated improvements; the ferry boat was running occasionally—but they were very light in their character. This was at the time that Huntington saw half a million of dollars expended, or about to be expended. He says: "I don't remember that I was ever there at all until about the time we purchased Block 9." Now, your Honor will recollect the other testimony of the same witness, I need not read it, in which he says that he first went over there with Mr. Cohen about the time of the purchase of this Oakland stock; or speaking of the time, he says: "It was the time that some piles were sticking up there, and that was about the time of the purchase of the Oakland stock." But he says here, on page 1,242, "I don't remember that I was ever there at all until about the time we purchased Block 9." He is asked the question, at line 29, "Did you take any personal part in the negotiation for Block 9, or for the purchase of it in 1869?" Answer—Only with Mr. Huntington.

Q.—Did you ever see Mr. Cohen in the course of that purchase? He says, "No, sir;" and then explains: "When the matter was turned over for me to look after, the trade had then been made."

Q.—That was the trade for the option and lease? A.—Yes, sir.

He says again, at page 1250, "I remember very well once being over there with Mr. Cohen, and looking at all that property around there with reference to depot purposes, but what time it was I cannot remember." Then immediately afterwards he says, in answer to the question, "Can you state whether or not it was previous to the papers made in 1869?" A.—"It seems to me that it was about the time of the purchase of the Oakland stock." He said only a few minutes before that he was never over there until about the time or after the time of the purchase of Block 9. And then, again, he says, a few lines afterwards, that it was about the time of the purchase of the Oakland stock. Now just reflect for a moment upon that evidence; there is no proof—the proof is all to the contrary that there were any improvements made there at the time of the purchase of the Oakland stock, or anything done there at all. The lease even had not been made by the Board of Harbor Commissioners. No work had been done and none was done until after Judge Crocker had applied for and obtained a copy of that lease, as his letters show you. Then the witness is asked, "Did you at that time talk with defendant as to your future intentions as to property in that locality or anything of that character?" to which he answers that he "cannot recollect anything definitely about it." I refer to page 1,385 of the testimony:

Q.—Do you say you conversed with the defendant from time to time as to the value of Block 9? A.—No, sir; I have not said so.

Q.—Did you know anything at the time the work was being done respecting the building of a ferry slip at the foot of Second street? A.—The probabilities are that I did know something about it, but I have no decided recollections about it. There was some work there at the time we purchased. I think some accommodations for the landing of the boat.

Q.—What time is it you are now speaking of? A.—At the time we purchased the Oakland road.

Now, all the evidence, of course, locates the time when the witness was over there, as the time the wharf was being built, though if the witness saw that wharf it could not have been at the time of which he speaks, the time of the lease of Block 9, but it must have been the time mentioned by the defendant in his testimony, some time in the fall of 1868, when that wharf was being constructed. It could not be any other time, and the testimony given by Mr. Stanford, that he was not over there till after the purchase, or at the time of the purchase from Tichenor, evidently must be erroneous. And there is one very significant point in connection with the testimony concerning the defendant's concealment of interest in Block 9, and that is also derived from the deposition of Governor Stanford, and it is his answer to question 143, when he is asked: "Did not the defendant then say to you that, although he had been one of the purchasers of Block 9, and was nominally interested in that block, yet in reality he had, at that time, no interest, because the price at which it was sold was not sufficient to yield any profit upon the previous purchase from Tichenor?" In other words, that, although he stood in the nominal position of having an interest in Block 9, yet in reality he had no substantial interest. Now, Mr. Stanford does not say then as he said here the last time he appeared upon the stand in rebuttal, when, as I say, he had understood the necessity of having this point clearly established if he could. He does not say then the defendant never told him of his interest, but he says this: "*You may have told me so, but if you did, I cannot call it to mind. If you did tell me, the impression has gone from my mind. I don't say but that you might have told me so, but it has gone from my mind.*" I say, the position taken by the witness, at that time, is very different from the position which he takes here when he

comes to testify finally. The first time time he says : " I don't say but that you might have told me so, but I don't recollect it." Now, he says positively, " You never did tell me so." As I said yesterday, in commenting upon Mr. Stanford's evidence, that is just the character of his mind. He first doubts, and then after a while he doubts no more, but goes right to the point. I ask, under all the circumstances, in view of the great intimacy that has been represented to have existed between Mr. Stanford and myself, and which I admit did exist, why should I not have told him? And why, if I told him of my interest in all the surrounding property, and was desirous, as he says, at the time, to sell it to him, why, if I wanted to sell him this particular piece of property, should I have concealed my interest in it? What earthly object could there have been?—the title all stood alike. It was all embraced in the declaration of trust from Ralston. But supposing I had wanted to keep it secret from him, could I have done so? My interest was known to Ralston, to Tichenor, to the McLanes—both Louis and Charles—and to Captain Eldridge. It was known to Mr. Wilson, as he admits here. It was known to Mr. Crittenden, as appears from the opinion which he gave upon the title addressed to myself, and the further proof that he made out the bill for his services in connection with this property against myself and I paid it, and he writes me a letter as to the manner of curing some slight defects in the title. It was known to Webb, the clerk of Wilson & Crittenden, in whose handwriting the opinion of Crittenden appears to be; and according to the testimony of Charles Crocker it was known to a party of the name of Wetherbee, who told him all about it, and sent him to Tichenor for further information. It is a little singular that this Wetherbee, whoever he is, was not produced here. There are a great many Wetherbees—both male and female—in the Directory, which the counsel has put in evidence, and as his or her first name has not been given I cannot be deemed to be personal in my remarks; but if Crocker did get such information as he says he did from this Wetherbee, he probably belongs to the same class of persons from whom I have been receiving written suggestions during the progress of this trial, though those I have received were not signed " Wetherbee "—in fact, the writers omitted signing their names at all, but have generally appended to their statements the words " One Who Knows," " An Enemy of the Railroad Company," and the like. It is, perhaps, fortunate for me that all the enemies of the railroad company in this community have not thought proper to write to me, for if they had, besides testing the capacity of the Post-office, they would have left me but little time to attend to the details of this case. The declaration of trust of January, 1869, had been executed and signed by all the parties, and either one could have had it acknowledged and put on record, and that would have published my interest, and certainly would have put a stop to anything like secrecy of my ownership. Then there is that opinion of Wilson & Crittenden upon the title, dated in November, 1868, which is addressed to myself, and which was given to Crocker in response to his telegram to have it ready for him when he should come here; and it was delivered to him, although he at first denied ever having telegraphed for it, and denied ever having received it. Your Honor will recollect this as the telegram that was produced after Crocker had denied any participation in the closing of the transaction of 1870. Now, I say, is it not strange that all the circumstances respecting the interest of the defendant in Block 9 should have been known to this Wetherbee. Is it not strange that he should be the man that first gave Mr. Crocker all the information on the subject, and that of all the persons in this community who knew of it—and there were a great many, as your Honor sees—Stanford, Crocker, Hopkins and Huntington should be the only ones that

were ignorant of that interest? They all swear that, every one of them—swear that they did not know it, and that is the only point of unanimity in the whole of this testimony between these principal witnesses. On every other point they differ. I undertake to say there was not a prominent real estate dealer in San Francisco, in 1868, that did not know that Ralston and myself had purchased an interest in Block 9 during that year. That Huntington should be expected to remember that he knew it is of course out of the question. His utter failure of memory is one of the remarkable circumstances of our time, and it is no less remarkable that the almost impenetrable gloom of that memory should be illuminated by the ray of the recollection of one solitary transaction in an active career of over forty years—viz: the purchase of this Block 9 by the advice, and with the assistance of the defendant. In 1868, or 1869, this community was not so large but that every transaction in real estate amounting to the sum of \$200,000 or \$250,000 was known to all who were prominent as owners or dealers in real estate at that time, and I say that all the circumstances favor not only the probability, but the certainty that the Stanford party had knowledge of my ownership, their denials to the contrary notwithstanding, and it is a very suspicious circumstance in this connection, that the testimony of all the railroad witnesses is uniform upon this one point—that is, the want of knowledge of my ownership, and upon that point alone. Upon all other topics no two of them agree. They, evidently, had been tutored to understand the importance of this point, and that the gravamen of the case could only be sustained by a dense ignorance as to any knowledge of my ownership in Block 9. I ask, is it at all probable that these persons alone, of all those with whom I came in contact in 1869 and 1870, were ignorant of my ownership in this property?

I call your Honor's attention to the differences in the statements made by these witnesses of how they first acquired this knowledge. I will first comment on Mr. Colton's statement. Mr. Colton tells you that he knew from Tichenor in 1868 that he had sold this property; that he (Colton) was interested in similar property, and it was a matter of some interest to know at what price such property could be sold; but yet he says he never knew Mr. Cohen was interested until the Fall of 1875 or the early part of 1876. It is certainly not very material when this witness first knew of my ownership or whether he ever knew of it, but with reference to the reliance to be placed upon the remainder of his testimony I ask your Honor's attention while I consider the probability of his statement. He says he was interested in similar property to this Block 9 in 1868; that he talked with Tichenor about it; and that Tichenor told him he had sold it for \$200,000. Well, I expect that is so. Now, what is the next question which a person of General David D. Colton's inquiring turn of mind would be likely to ask? What is the question any one would ask? Why, as a matter of course, he would have said, "To whom did you sell? Who is the purchaser?" Of course he asked, and of course Tichenor told him. There was then no motive on Tichenor's part to misrepresent anything or anybody, and he undoubtedly told Colton the truth, and the whole truth. Therefore, I undertake to say, and your Honor cannot fail to conclude, that General David D. Colton was mistaken when he swore that he never heard of my interest in the property until late in 1875 or early in 1876. But we have positive testimony upon this point, and that is the deposition of Dr. C. A. Henry, who could not appear by reason of sickness, and counsel and myself attended at his house and took his deposition. Dr. Henry tells you positively that in the summer of 1870 he was directed by the officers of the plaintiff to me as an owner of the property to make arrangements for a coal depot for the use of the Rocky

Mountain Coal Company. Of course the Railroad witnesses have been brought here to swear that they did not send Dr. Henry upon any such errand; but even though they swear as often or as vigorously as the army swore in Flanders, the fact remains that Dr. Henry did come to me with that proposition, and did tell me that he had been referred to me by the railroad officers, because I was an owner in the property he wanted to lease. It becomes a question of credibility between this witness and the railroad witnesses. Dr. Henry has certainly no interest in misrepresenting. What possible motive has been shown for Dr. Henry's inventing any such statement? There is certainly no cause shown why he should come here and perjure himself. He has neither feeling nor pecuniary interest in this suit, and certainly his evidence is entitled to as much consideration, and it ought certainly to rank equal to, if not above, the evidence of witnesses who have expressed and shown, and who necessarily must have, under the circumstances of the case, strong feelings with reference to the result. But Dr. Henry corroborates his statement by saying, "that failing to make an arrangement with me, he went to Mr. Hooper, who owned the adjoining property, who was one of the purchasers of a portion of the Pacific Mail property at the Dore sale, and tried to rent from him." If it had been intended to attack his statement, it seems to me that Mr. Hooper should have been called for that purpose. Of course we could not call Mr. Hooper to sustain our witnesses, but the other side might have called him, if Dr. Henry's statement was not true. Mr. Hooper is a prominent gentleman of this city, an old citizen, and could very easily have been found and brought here. If it were a material fact in this case, I think your Honor must find that the Stanford party knew, in 1870, of my ownership of an interest in Block 9, but it is not material, because the relations existing between the purchasers and myself were not such as required I should make my ownership known. As I have said before, the counsel has alluded to the intimacy and warm feelings of friendship existing between Stanford and myself. He has also mentioned the remuneration I was receiving for attending to the affairs of the Oakland and Alameda companies, and the sums paid for special services. He also claims that I had an enormously profitable contract for the transportation of coal. Is it not somewhat inconsistent for him to urge that I would forfeit my chance of retaining all these emoluments, and for what? That, by keeping silent as to my interest in this property, I might make to myself a profit of \$3,000 or \$4,000, and enable Ralston, Tichenor, the McLanes and Eldridge to make each as much more, with none of whom, excepting Ralston, had I any alliance or any relations whatever.

I think it is perfectly clear to your Honor's mind, without going over it again, what Mr. Stanford's evidence is with respect to the manner and way in which he derived knowledge of my ownership in Block 9. He makes two statements. He says he never knew of it until after this suit was commenced. He then says that he knew of it just before, as he came down from Sacramento, a little while before the suit was commenced, and that Mr. Crocker told him about it, and he told him to be very sure, and not make any mistakes. To be sure, he was right before he did anything. I do not know whether he used the words of the celebrated Davy Crockett, but he came very near it. General Colton was on the stand, and he was asked by the learned counsel—Do you know, General Colton, how it was first discovered the fact of Mr. Cohen's having an interest in Block 9, the date when it was discovered, etc.? "A.—I don't know the time; I can give the circumstances as to the first discussion among our people of the matter. I first knew of it in the fall of—the very last of 1875, or the early part of 1876. I think I knew nothing about his relations with it until 1876; but on taking charge of the

financial department of the Central Pacific, I had occasion to examine this matter. I found that the Central Pacific Company had paid \$250,000 for this property. At the time it was sold, as I understood, in 1868, I knew Tichenor very well, and I know that he told me that he only got \$200,000 for it; and I then asked Mr. Stanford, Mr. Crocker and Mr. Hopkins as to the difference; that was in the last of 1875 or the beginning of 1876." Your Honor will see, as we go along with the testimony, that it must have been the last of 1875, because it was before he sent for Tichenor to get a deed from him, and that deed is dated December, 1875; and therefore it must have been some time before the date of that deed when he found it charged upon the books of the railroad company at \$250,000. Then he goes to Governor Stanford and Mr. Hopkins and Mr. Crocker to inquire about it. Now, what do these gentlemen say about it here? In the first place, Mr. Hopkins says: "I don't know anything about it." Mr. Crocker says that he derived his information, not from Mr. Colton, but the first he knew of it was in the month of January or in the month of February, when this mysterious Wetherbee gave him the information, and told him if he went to Tichenor he would get the particulars. Now, Stanford does not say that Colton told him anything about it, as you will see from his testimony. There is an irreconcilable difference in these statements about a very material fact—a very material fact from the counsel's point of view, not from ours. If the question as to whether these parties knew of my interest in Block 9 is material, then I say that there is an irreconcilable difference between these three principal witnesses in the case as to the time when this knowledge first came to them. Mr. Colton continues, "Mr. Tichenor was sent for. I found he had never given a deed to the Company. I think it was in that interview, as I understand it, they were all very much surprised that he (meaning the defendant) had any interest in it at that time."

Q.—That was the first you knew of it? A.—Yes, sir.

Q.—And the matter was discovered in that way, through your intervention? A.—Yes, sir; through those two circumstances.

Then the witness goes on at great length, both in his direct and cross-examination, to explain his testimony; and he makes a very remarkable statement as to the reason why he inquired of Stanford, Crocker and Hopkins, which was that he thought that this \$50,000 had been made by the Contract and Finance Company—which must be regarded as a very unjust aspersion on the part of Mr. Colton on that highly virtuous and honest corporation, the Contract and Finance Company; I watched Mr. Crocker's countenance as he sat in that chair, and he did not seem to appreciate Colton's pleasantry. Afterwards he says, on cross-examination, page 1,766: "I did not send for Mr. Tichenor after this inquiry arose." I do not suppose he did. "A.—I did not send for Tichenor after this inquiry arose as to who got this \$50,000. Either Stanford or Crocker sent for him." Well, that is General Colton's statement about this matter, and it cannot be reconciled with the statements of either of the other witnesses. Now, what is Mr. Crocker's statement? He makes two statements also. We will take his deposition, and right at the commencement of the questions we ask him:

Q.—Do you know anything concerning the alleged purchase of a parcel of land known as Block 9? If so, state what you know fully and particularly. A.—I know only by hearsay.

Q.—You have no personal knowledge on the subject? A.—Only by what I have heard from others. Well, I may correct that by saying I have seen the papers relating to the transaction *and have paid interest money*, and in that way I knew of it.

Q.—Then you cannot give us any information of your own knowledge as to the

truth or the reverse of the averment of the complaint relating to the purchase of that parcel of land? A.—Only by what I have heard from others.

Well, Mr. Crocker is not a man of good memory. Certainly he has not that kind of memory which a certain class of persons are said to have, because he comes here, and at page 329 of his testimony, to a question put by the learned counsel, he says :

Q.—Did the Contract and Finance Company ever pay any money on this block, or was it paid with the funds of the Western Pacific and Central Pacific? A.—*As to payments, I am not familiar with them. I did not handle any money.*

Now, if your Honor has any leisure time, and can reconcile those two statements, and will undertake to do it, it will be a very interesting pursuit. In the first statement in the deposition he says : “ I have paid interest money, and in that way I knew it ; ” but here he says : “ As to the payments, I am not familiar with them. ” Then again, at page 1,161, he is asked by Mr. McAllister :

Q.—Had you anything to do with this purchase of Block 9? A.—No, sir ; nothing more than to sign the papers as President of the Contract and Finance Company.

Q.—Did you act personally in regard to the negotiations at all? A.—No, sir ; not at all. I first had knowledge of Cohen’s ownership in January or February of this year.

I am not going to test even the accuracy of Mr. Crocker’s testimony by a comparison with Mr. Huntington. I will not do that, although I cannot be accused of feeling any too friendly to Mr. Crocker. What does Huntington say? He says : “ I never knew from Mr. Cohen that he had any interest in Block 9. I think before the last time I was here, that was last fall or late in the summer, I think there was such a rumor. I think Mr. Crocker said to me that Mr. Cohen sold us his own property ; that is, that he had bought it for us. I do not propose to lay any particular stress upon that statement of Huntington’s, but it is one of the circumstance to be taken into consideration in weighing the testimony. There is another point in Mr. Crocker’s testimony by which the value of his recollection is to be decided, and that is in these various letters that are put in. Of course your Honor can very well understand that I have not been trying to waste the time of this Court by reading or offering letters without a purpose. The witness had said, and I think several times in the course of his testimony, that he did not think he had written a letter to Mr. Cohen on that or any other subject (page 1,219). That has been repeated several times, and these letters are put in here just for the purpose of impeaching the reliability of Mr. Crocker’s recollection. Then, again, there was that telegram, which Mr. Crocker positively denied having sent. In arguing this case and in commenting upon the testimony of this witness, I propose to do it, unless I am blinded by feeling, and the deep interest I have in the case, as fairly as I can. I do not undertake to say for a moment, even with the decidedly pronounced feelings that I have toward Mr. Crocker, that the statement of Mr. Crocker about that telegram, or, in fact, many of the statements that he made, which were found to be incorrect and untrue, were intentionally so; I do not believe myself that they were ; but I do urge them upon your Honor as going to show that when he does state a fact positively upon his recollection it must be received with great caution. There is a circumstance, too, in connection with the testimony of this witness, which I mention, and I do it with all proper respect. I take no satisfaction in the personal misfortunes of anybody, not even of one of whom I have so much cause to complain as I have of this witness. Mr. Crocker tells you that about that time, the time of these dealings with Block 9, he was advised by his physician to go away, that his brother’s mind had been affected by a stroke of paralysis, and he

thought, to use his own language, that he "was likely to go the same way." I allude to this as a circumstance to show that Mr. Crocker's recollection, invoked now as to transactions that occurred so many years ago, is not that class of testimony upon which such an issue as this should be decided.

There were certain letters read here, by the learned counsel in his opening, and read with a great deal of emphasis, as being very important. Two letters written by myself, both dated July 11th, 1870—one to Stanford and the other to Towne—and great stress is laid upon those letters as showing that I was urging the completion of the purchase in 1870, and that I was doing it upon the assumed pretense that it was for the interest of the company to take the property, and that I was putting Mr. Tichenor forward as the owner, whilst I was myself one-fourth owner. As to the first proposition, the evidence is, I was at that time the President of the Consolidated Ferry Company, and had undertaken to build a new ferry steamer, the *Thoroughfare*. All the steamers we used at that time belonged to the company, of which I was still a stockholder and President, and which company commenced the building of this steamer, as you will see from an entry on its books, and upon which it expended \$1,761 before the consolidation with the Central Pacific in August, 1870. Now, why were these letters of July 11th written? When the counsel read those letters, undoubtedly it had escaped his attention that there is a telegram here signed by Mr. Towne and sent to the defendant, bearing the same date, and as follows: "Sacramento, July 11th, 1870, received July 11th, 1870, 12 m. To A. A. Cohen: May I trouble you to see Mr. Tiernan, and have him commence work on boat as soon as possible. A. N. Towne." Your Honor will see that those letters of July 11th were in answer to that telegram. Towne, the General Superintendent, wanted this boat commenced. But there is a further fact in connection with those letters which I will call your Honor's attention to. Taking those letters in connection with the telegrams, they will show that Mr. Towne more than probably knew of my interest in this Block 9, and also show why it was that I took no active part with respect to the affairs of Block 9, as between the railroad company and the owners, until the time I have stated—January, 1870,—which statement the learned counsel commented upon and thought was highly improbable. It will be seen that Mr. Towne, the General Superintendent, was impressed with the importance of having more room at Second Street than was afforded by the one-half of Block 9, which had been let to the Western Pacific, in October, 1869, and that small portion of the water front which had been leased from the Harbor Commissioners to the Oakland Ferry Company; for on January 8th, 1870, he telegraphs to me: "Will neither love nor money give us what we want at Second Street? It seems of much importance we have more room there." On that suggestion of Mr. Towne's, I took part, for the first time, in matters relating to Block 9, and had very frequent conversations after that time with Stanford and Towne, in reference to the Block. I do not mean to say I had not before that time, and after the transaction of 1869, talked with Stanford about it, but it was after that dispatch of 1870, as I shall show your Honor, that I first took any part in the affairs of Block 9. In the same month, January, 1870, we find another dispatch from Towne, asking: "How soon can you make arrangements so we can go on with improvements at foot of Second Street?" Your Honor recollects with regard to this slip at the foot of Second Street, that it had been erected by the Oakland Ferry Company, of which I was President. The property had in effect been turned over to the Western Pacific, but not legally so, because the Harbor Commissioners could not by law recognize anybody but their lessee. They were not

recognizing the Western Pacific, and, of course, were dealing with me all the time as representing the Oakland Ferry Company, so that any communication made by the Western Pacific, or by Towne, as the General Superintendent of the railroad, must necessarily be made through myself, and I had to deal with the Harbor Commissioners. It will be seen it was at Towne's solicitation that I took any part in inducing Stanford to exercise that option, and I call your Honor's attention to the letter to Towne I have just mentioned, of July 11th, 1870. It commences [reads from the letter] "I proposed to the Governor when he was here to take Block 9." You will see that this was not the opening of the subject; the mode of expression shows that the subject had before that been discussed between myself and Towne. Mr. Towne evidently understood the whole matter, for on July 12th, 1870, the day which, in the ordinary course of mail, he must have received my letter of the 11th, he telegraphs as follows: "I hope to bring up and dispose of the matter to-day of which you wrote on the 11th, so that the work on new boat may not be delayed." Evidently the matter was urgent in Mr. Towne's estimation, for he telegraphs an answer to my letter, and says he will take action so that the work on new boat may not be delayed. Your Honor will see I had said nothing about delay on new boat, but it will appear from this dispatch of Mr. Towne's that those letters of the 11th of July were written so that a place might be provided, and work on that new boat commenced. I had undertaken to build that boat, not for the Western Pacific, as has been asserted here, but, as the first payment shows, for the Ferry Company. The first part of the construction of a vessel is laying down the keel, but before that can be done there must be a place to lay it; therefore it was that I asked Stanford to consent to my arranging with Tichenor, not to take Block 9, but to give up one of the ways, or marine railways, and the front of the lot on Townsend Street, for such time as would be required to build the boat.

The counsel has complained that we take isolated facts and endeavor to demolish his case by piecemeal. What has he done? Why, he takes every act in detail and tries to prove either an agency or that a wrong was intended upon the plaintiff; and so in the matter of these letters he says, Mr. Cohen does not say he wants to remove one of his own ways, but he says Mr. Tichenor's ways. Now, the answer to that is, and I speak from the evidence, that substantially I had not paid any money on that purchase of Block 9; that I had previously realized my situation with reference to the property, and found I was not likely to derive any profit from the purchase, and, as I had explained to Stanford, I treated the matter as one in which I had no further personal interest; in other words, that Tichenor's charges for interest taxes and other expenses, after the purchase of 1868, had consumed the increased price over and above the purchase money at which the Contract and Finance Company had the option to take it. That was in substance the statement made by Tichenor to Ralston and myself, and, as the counsel knows, it was the statement made by Tichenor to McLane; and, as the evidence shows, just before the commencement of the trial Tichenor repeated the same statement to Judge Lake and myself. Undoubtedly the statement made by Tichenor was untrue, but that I believed in it is indisputable, from the fact that from that time to the present, a period of six years, I never called upon Mr. Tichenor to pay to me my one-fourth of the surplus, which I certainly would have done if I had understood it was in his hands, and to quote the words of one of the witnesses in this case, "Very early in the morning." The learned counsel was very inaccurate when he says that I represented myself as the agent of the railroad company. When a man is writing to another, with

whom he has had frequent conversation and understandings as to the subject matter of the correspondence, he does not go over the whole ground in a letter. If I had not felt that Stanford and Towne knew my true position, that letter would not have been written. It is convenient to these persons not to recollect the conversations they had with me ; but no man not an idiot would have written such letters, and in that strain, if he had any sinister purpose to carry out. Mr. Stanford's attention was called to that letter in the taking of his deposition—question and answer No. 342—and he did not undertake to say he had been misled by it, for, when asked, "Do you recollect what action you took upon that letter?" he said, "No, sir ; I do not." And he further says in the same deposition that the subject was discussed at a meeting of the Directors of his company, whether the Contract and Finance Company or the railroad company he does not say, and they concluded to exercise the option and take the property. And he was asked if there was any inducement or any advice given to him by the defendant (question 44) that induced him to make that election, and he answered : "I cannot call to mind that there was, but I believe that very likely I had talked with him about the property, but I cannot call to mind any particular thing at this time."

We come now to a point where it is desirable to pause for a moment and consider who the purchaser was of this Block. The papers of 1869 and 1870—that is, the contracts of those years—are between Tichenor as the vendor and the Contract and Finance Company as the purchaser. The Contract and Finance Company was a corporation entirely distinct and separate in its legal existence from any of the other corporations that have figured here. It was not a corporation that could be consolidated with a railroad corporation, nor has it been contended that it was so consolidated. Governor Stanford has said here that it was intended to purchase this property for the Western Pacific, but that it was taken in the name of the Contract and Finance Company because, if taken in the name of the Western Pacific, it would be liable for the debts of that company—that is, it would be subject to the lien of the mortgage which had been made on all the property of that company, and it is set forth in the pleadings ; and the testimony of Stanford, although contradictory on two different occasions, is substantially, that in this transaction the Contract and Finance Company acted merely as the trustee of the Western Pacific. But this is not true, as the papers prove, and I will refer to them in a moment. But, if true, what a position these highly respectable gentlemen place themselves in ! The property was to be paid for with the corporate moneys belonging to the Western Pacific, but it was to be kept beyond the reach of the creditors of that corporation by taking title in a stranger. It is not contended that the Stanford party were disbursing any of their own money in this purchase. But if it were true, it fixes no liability on the defendant, because at the time of the transaction of 1869 he was not the agent of the Western Pacific ; he took no part in that transaction, and his first active interference in 1870 was after the Western Pacific had ceased to exist, and just previous to the time that Stanford swore the defendant was not interested in the corporation into which the Western Pacific had been previously consolidated. I believe it is conceded that in 1870, prior to December 29th, the defendant was not the agent of the Central Pacific, and before that time this transaction had been consummated. But it is not true that the Contract and Finance Company was a mere naked trustee ; the proof is to the contrary. When that transaction of 1869 was made, the intent undoubtedly was to take title to the Contract and Finance Company, and if the property advanced in value the Stanford party, under their corporate guise of the Contract and Finance Company, would have charged such increase of value to the Central Pacific—following the course adopted in building the railroad of the last-

named company and in innumerable other transactions. But when they found the real estate market was weak and prices of property were declining, they hastened to transfer their purchase to the Central Pacific. As I have said, the papers show that the Contract and Finance Company was not a mere Trustee, but was in fact the purchaser. The first payment of \$10,000 was made by the Contract and Finance Company, and not by the railroad company, which it is obvious would not have been done if the Contract and Finance Company had not been at that time regarded as the purchaser. And the resolution which it is claimed by the plaintiff was passed by the Contract and Finance Company on December 1st, 1870, and which is annexed to the contract of 1870, recites as follows: "Whereas, the Central Pacific Railroad Company is desirous of purchasing that certain parcel of land described in a certain contract of agreement between Henry B. Tichenor and the Contract and Finance Company; and whereas the said Contract and Finance Company is desirous of selling the said property—" It does not say that whereas the Contract and Finance Company has, in making this agreement with Henry B. Tichenor, acted as the trustee and agent of the Central Pacific Railroad Company. Now, therefore, in pursuance of said trust, the title or whatever equitable rights there may be are hereby transferred," but it starts out with a statement that one company is desirous to buy and the other company is desirous to sell, and we are entitled to assume the truth of the papers that the plaintiff introduces in evidence. We have a right to claim credence for the recitals of their own papers and to place some reliance on their own documents, approved and executed under the big golden seal of the Contract and Finance Company. This paper says: "Whereas, the Central Pacific Railroad Company is desirous of purchasing; and, whereas, the said Contract and Finance Company is desirous of selling." Does that look like a naked trust? If your Honor arrives at the conclusion that the Contract and Finance Company was the purchaser—and, from the evidence before you, I do not see how you can do otherwise—then the claim of the plaintiff as to Block 9, must fail, even conceding that it has proven every other allegation or averment. Even the fertile imagination and assumption of the plaintiff's counsel does not go to the length of claiming that I was the agent, at any time, of the Contract and Finance Company, that corporation which a distinguished Senator has not inaptly spoken of as a twin sister, in incestuous shame, of the Credit Mobilier.

The Central Pacific Railroad Company and the Contract and Finance Company are artificial persons; as distinct from each other as are two natural persons. Therefore a purchase of property by one of them can in no sense be a purchase by the other, even if the same individuals owned all the stock of both.

"A corporation," says Judge Marshall, in 4 Wheaton, 636, "is an artificial being, invisible, intangible and existing only in contemplation of law."

The definition of Mr. Legare, then Attorney-General of the United States, in the case of the Louisville Railroad Company *vs.* Stetson, 2 Howard, 520, has been much commended: "A corporation, or, to speak in more accurate and scientific language of the continental jurists, a juridical person, is a creature of the law, known to it under a given name, whose essence is in that name and the social identity it implies; whose capacities are defined in its charter; whose will is expressed under its seal; whose unity is affected by no change in the parts that compose it, and whose existence survives the death of its members."

These definitions vividly explain the distinctive character of the two corporate bodies in question. No matter who owns stock in either, each is separate from the *parts that compose it.*

This doctrine was enforced in *Bank of South Carolina vs. Gibbs*, 3 McCord, 377.

There is one other fact spoken of here by the counsel, on which great stress has been laid, and that is the matter of the assessment of 1872. What occurred between Stanford and myself about that? Stanford has told you that he felt that he ought not to pay that assessment, and that he spoke to me about it. You have also heard the circumstances under which he had that conversation with me, what occurred, and what I did. There was one statement of mine that counsel noticed and commented upon, that is, wherein I said that I was willing at that time to pay that assessment, even although I did not consider myself liable, and that I urged Mr. Ralston to pay it. Counsel says, "Do you think that a man of Mr. Cohen's admitted business ability—I have forgotten exactly the language, but I am quoting it very nearly—would be likely to pay an assessment he was not liable for?" But, on the other hand, counsel has been urging, all the way through, the enormously profitable connection I had with this gentleman, the intimate relationship that existed, and yet he says now, that it is not at all probable that for the purpose of preserving that intimacy and of avoiding a quarrel or even putting it down to the most selfish view from which it can be looked at, that of saving the emoluments and gains he says I was receiving, I was not willing to sacrifice one-fourth of \$14,000—\$3,500—for the purpose of avoiding a quarrel. Mr. Stanford said that he was very much incensed, and was going to law about it. I think that was the expression. Under those circumstances, and the relations existing in 1872, between Mr. Stanford and myself, was it at all unnatural that I should have said to Mr. Ralston, "Well, let us pay it?" It was undoubtedly a *casus omissus* on both sides. The liability of the property for the assessment had been forgotten at the time the contract was made. Was it strange that I should, in the position in which I was placed, have been anxious to have conciliated Mr. Stanford and avoid a quarrel by making a concession on my part to the extent of \$3,500? The evidence discloses the transaction with respect to that assessment. Mr. Stanford suddenly came to the knowledge that the property which he had bought for \$250,000 was liable for the further payment of \$14,000, and he naturally wanted to get rid of it if he could. The sellers, on the other hand, looking from their standpoint, said: We have sold this property for what we have paid for it, we have not made anything on it, and they said, if we pay this \$14,000, we shall be out of pocket. We have given the purchasers all the profit and the benefit of our services, and the benefit of all the risks and chances we took, and now they want us to pay this assessment. They have had the benefit of this street improvement for which they are assessed.

But it is contended that one of the circumstances going to show that Mr. Stanford did not know at that time that I had an interest in Block 9, was that he came to talk with me about it. Now, will your Honor believe that with all the relations that were existing—and the correspondence shows you at that time the many and large money transactions in which I was engaged with this company—here are letters showing a \$500,000 transaction with Mr. Latham's Bank on one day; a \$300,000 or \$400,000 on another—transactions with Mr. Tillingham's Bank, and other large transactions with the Bank of California, in which I was acting for these parties, and they were owing me large sums of money themselves—that in a little matter of an assessment, Mr. Stanford would have not talked with me about it, because I had been interested in the property? Mr. Stanford surely negatives the idea himself. In speaking of the purchase he says: "If I had known that Mr. Cohen was interested in this property I would not have treated with anybody but him." Is it improbable that Mr

Stanford would have come to talk with me about that matter simply because I was interested ? Mr. Stanford says that he did not know at that time that I was interested. I say that Mr. Stanford did know, and my interest was one of the subjects of discussion at that very interview when the assessment was talked about ; and he was ungenerous enough to intimate that I took grounds against him on account of my interest. He was asked concerning it in his deposition, and I call your Honor's attention to that fact, that the deposition of this witness was taken by the defendant himself. The questions asked in this deposition is not a view of a case presented to you by the defendant, after he has heard the case of the plaintiff ; it is not a theory that he makes up after he hears what the plaintiff has to say, but before he hears any testimony, and before he knows what kind of a fabric it is intended to build up, or what are the meshes with which the plaintiff intends to surround him in the case ; but right at the very outset of this case, in this question which he puts to the President of this corporation, he gives his understanding and his recollection of the interview relating to the assessment ; and I said yesterday, and your Honor must recollect, that these were transactions that had occurred years before, and there had been nothing in the meantime to bring them up, nothing to call attention to them. There was no reason why any theory should have been formed about it, but the very first time that the defendant and Mr. Stanford came together after this complaint was filed, and within a few days afterward, he says to Mr. Stanford : " Did you not at such a time say so and so about this assessment ? "

I will say but a few words more as to the exact character of the relation I occupied toward the plaintiff from and after the fall of 1870, during the time it paid me an annual retainer. I will give first my understanding of that relation. I was then, as I am now, an attorney and counsellor at law, and although then, as now, I had relinquished general practice, I was then, as now, in the habit of accepting professional employment in cases of sufficient magnitude to invite my efforts, provided I could do so without detriment to large private interests which occupied the greater share of my time and which were of great moment to me. The plaintiff was then, as I presume it is now, in the habit of employing two classes of attorneys. To one class it paid an annual salary, for which it received the entire time and services of the parties employed. The gentlemen whose services were thus engaged had their offices in its offices, or in offices rented by it, and were either not at liberty to accept professional employment from others, or if technically at liberty to do so, were practically inhibited by the drafts upon their time made by the business of the railroad company. Mr. Brown, Mr. Sanderson and Mr. Robinson, I presume, belong to this class. There was another class of attorneys in receipt of an annual retainer from the company, but whose services were seldom required, or, if required, were specially compensated in addition to the annual retainer. The second class were not at liberty to take any case against the railroad company, but no services were exacted of them except when specially required, and when so required were specially paid. Mr. Felton, Mr. Wilson, Mr. Barnes and the counsel who appears in this action were thus employed. It is not for me to say that in giving these employments the company was divided in motive as are the members of orthodox churches in the motives of their religion—some from love of the Lord and some from fear of the devil.

In accepting the annual retainer from the company to which I have made reference, I understood, and the officers of the company understood, that I occupied the same position as that of Mr. Felton and the others named, and not that occupied by Sanderson or Robinson. To assume that for \$10,000 a year I agreed to give my entire time and effort to the plaintiff's business is a very violent assumption, but the testimony

of Stanford negatives that. I was managing private interests requiring the most of my time, and I would not have agreed to abandon those and devote myself to the plaintiff's affairs exclusively for five times the retainer paid. Take either construction, however, of the character of the employment accepted by me of the plaintiff in 1870, and where can your Honor find any evidence whatever to charge me with fraud or misuse of my position as agent or attorney? If I had been such an attorney of the plaintiff as Judge Robinson is, and if the contract for the purchase of Block 9 had been first made while I was such an attorney (and neither of these propositions is even remotely true), I still ask what is there in the law of agency to prohibit an agent from selling to his principal at a fair price property acquired by such agent before the agency commenced?

When a man employs me to do any business for him, either as agent or attorney, unless he employs me in the very identical matter, am I to be debarred from selling him any real or personal property I may happen to own?

In a case of this character—in any case where fraud is charged—it is to be proved, not presumed. You cannot take a thousand little nothings, as has been done here, nor the statements of interested parties, as to every little circumstance in a long course of intimacy after they have quarrelled, and when they are excited by all the angry and bitter feelings that have been engendered by reason of such quarrel. You are not to judge of acts done years before in the light of such representations. As Lord Hardwicke said, "Circumstances of suspicion are not sufficient for a Court of Chancery to find a decree upon."

When I consider the total inadequacy of the plaintiff's case, its wealth of assumption, its plentiful lack of evidence, and its utter misconception of the elementary principles of law, I am at a loss to understand why it was ever brought into Court at all. I understand very well why the plaintiff should desire to bring it, but I cannot understand why lawyers who have any respect for their reputations should be willing to advise the commencement of so barren and trifling a cause.

Neither as a lawsuit, nor as a dramatic or newspaper episode, is it likely to prove a success.

The play of which this Court-room for weeks past has been made the scene has been extensively advertised, and elaborately, if not fortunately, cast. There is Mr. Stanford, the heavy character of the plot—sullen, saturnine, remorseless, grand, gloomy and peculiar; with the ambition of an Emperor and the spite of a peanut-vender. He stalked across this Court-room and ascended the witness-box; spoke his part in a basso-profundo growl and departed, while the attendant actors held their breaths in awe.

Then there is Crocker, who longed to languish in the scene as leading lover, but, being too fat of diaphragm for genteel comedy, and too fat of wit for low comedy, was compelled to be content with the place of general utility man, whom the counsel would only trust to carry off the dead, light the lamps and sweep the stage.

And then, coupled with Crocker, in all social and moral qualities, *par nobile fratrum*, is "GENERAL" David D. Colton.

In former times, when I had business relations with the plaintiff and its officers and agents, I was compelled to come in constant contact with many men whose habits, whose manners, whose modes of thought and whose conversation were not calculated to advance me either in my own esteem or in that of my fellow citizens, but I thank God, who tempers the wind to the shorn lamb, that I was not required to co-operate with "General" David D. Colton. Whatever bitter recollections may crowd around

my dying hours, that pang, at least, will be spared me. Who can look at him and not feel that in all the range of the drama there are but two characters he may fitly represent—General Nick Bottom, the weaver, and General Bombastes Furioso, the soldier !

But why do I need to invite this Court to consider the manners or morals of "General" David D. Colton. In years now gone, in the earlier—I had almost said the purer—days of California, when your Honor was a Provincial in the place of a Metropolitan Judge, "General" David D. Colton locked up the prisoners whom your Honor tried, and lighted and swept out the Court-room where your Honor presided. The accidents of fortune brought him to this city, and when the reins of partizan political power dropped suddenly from the stricken hands of one of the great party leaders of California, General David D. Colton, at the same time that he absorbed to himself a large part of the estate of his dead master, to the exclusion of kindred and heirs at law, seized the whip, and, with brazen face and sonorous shouts, assumed to drive the political team. In this way he brought himself into notice ; notice gave him the semblance of influence ; influence brought him opportunities for aggrandizement through the business of controlling legislatures, and the Sheriff of Siskiyou became one of the capitalists of San Francisco. The inflation of his fortunes has brought with it inflation of vanity, until to-day there dwells no man on this peninsula so able, so adroit, so wise, so influential or so important as is "General" David D. Colton—in his own estimation.

He sailed into this Court-room like one who conferred a favor upon us all by his presence. He testified concerning the shameless conspiracy in which he had borne his part with the air of Olympian Jove, and he departed with a manner that seemed to say: "There; you see that I, even I do not disdain to enter the witness-box like an ordinary citizen." General David D. Colton will never go from among us by the ordinary processes of nature. When that dread hour arrives wherein a mourning community can hope to retain him no longer, it will only be necessary to cut the thread that binds him to this cold earth, when, like one of the painted transparent bags of gas sold by the toy venders upon the street corners, he will sail gently away into the clouds and be seen no more.

Mr. Crocker showed a great deal of feeling in this case, and wishes to have the credit of inaugurating it, but then Mr. Crocker is a great man; I do not think the most carping critic will deny that. He is great at any point from which you look at him. If you survey him from his broad pedal extremities to the narrow apex of his cranium, or whether you look at him longitudinally, you see that he is great; and if you walk around him, by the time you return to the starting point you are assured of his greatness. He has given us the benefit of his presence during most of the time that this case has been progressing, and being desirous of making the best possible impression upon the Court and the bar, he has reclined back in one of these chairs and with his feet elevated upon the rail surrounding the jury box, has presented to our gaze that portion of his person for which he has the most admiration. Now, I would not be thought as intending to insinuate that Mr. Crocker's demeanor was not entirely decorous, or that he would ever depart from a line of conduct contrary to the most orthodox rules of refinement. Mr. Crocker is a "traveler gentleman;" he told you that he had been to Europe, and he has been, he says, "around the world." He did not tell us whether he is the person commemorated by Jules Verne, who made the trip in eighty days, but I incline to the belief, from a knowledge of Mr Crocker's attributes and from his appearance here, that it was done hurriedly.

There is no doubt, however, that after Mr. Crocker had so unselfishly devoted his

whole private fortune in aiding the National Government to build the transcontinental railroad, and had, through the aid of Charles Crocker & Co. and the Contract and Finance Company, reaped the reward of his unselfishness, he betook himself out of the sight of the defrauded stockholders of the Central Pacific Railroad Company, whose agent and trustee he had been, and departed for other shores and other climes. I do not mean to say that he carried with him an undue portion of the goods and chattels which he had so easily acquired; on the contrary, he resolved at the same time to set at defiance the claims of his stockholders, whose investments he had absorbed into the Contract and Finance Company, and the judgment of public opinion. He said: "I will drop the obsequious smile with which I used to roll up calico and tape for my customers, and in its place there shall come the arrogant, supercilious grin of oleaginous self-satisfaction. I will build myself a mansion, which I will set upon a hill. I will upholster and furnish it so that visitors shall be filled with doubt whether it is designed for a haberdasher's shop or a stage scene of a modern furniture drama. I will purchase goblin tapestries, and employ some one to tell me whether they should be hung upon the walls as paintings or spread upon the floor as mats. I will buy pictures from the galleries of the Medicis, and employ Mr. Medici himself to make the selections. I will show to the world how an intelligent patron of art and literature can be manufactured by the powers of wealth out of a peddler of pins and needles. I will visit Europe, and remain until I can ornament my ungrammatical English with a fringe of mispronounced French. I will wear a diamond as large as the headlight of one of my locomotives; and my adipose tissues shall increase with my pecuniary gains until my stomach is as large as my arrogance, and I can strut along the corridors of the Palace Hotel, a living, breathing, waddling monument of the triumph of vulgarity, viciousness and dishonesty."

Then we have Miller, Edward H. Miller, Jr., the general Secretary and the general swearer of all the corporations. He swears on paper, first, that he knows a thing of his own knowledge, and then makes a second affidavit that he knows it only because Judge Robinson told him so. May God, in His infinite mercy, have pity on a man of such boundless credulity as to base his knowledge of anything upon the statements of Robert Robinson.

And then there was Ryan and General Superintendent Towne, all swearing to the best of their ability, and all swearing to nothing that can warrant any kind of judgment for the plaintiff. With this whole army has this plaintiff marched into Court, and for what? Why, to harass and vex, and insult and bespatter a man who would not tamely submit to injustice, and whose sole offense was that when assaulted he struck back. This corporation, WHO IS AS PETTY IN ITS PERSECUTIONS AS IT IS MIGHTY IN ITS PECULATIONS, comes into Court to ruin the reputation of the man whom it has for years been relying upon for advice and pecuniary assistance, and with whom some of its officers have quarreled; and then those officers run away from the State before the trial is concluded, so as to prevent the defendant from examining them on points which it would have been unpleasant to discuss in public.

Does Leland Stanford think that I owe his road anything in the world? In common with the whole people of the State of California, it was an unfortunate hour in which I first saw him. He found me in the possession of one of the most valuable properties in the United States. By his peculiar tactics of mingled threats and cajolery, I was induced to sell to him and his associates at a very insignificant price. But of that I do not complain. I consented to it, and that is sufficient. But I mention

the circumstance to rebut any statement or presumption that I am under any obligation whatever to the so-called Stanford party, and if they would stand to their contract on Block 9 and on the coal transportation with the same good faith, this action would not be on trial.

Now, let me point out the status of Mr. Stanford and his co-conspirators toward myself. The complaint avers, and Stanford, Crocker and their man Friday, *General* David D. Colton, all swear that they discovered the alleged frauds in the transportation of coal in July, 1875. At that time they were indebted to me in the sum of upwards of \$610,000. In August, 1875, they paid me the sum of \$270,000 and accrued interest. There was no word uttered, no sound given, that they thought they had not been fairly dealt by until Stanford returns from New York in September, 1875, when he tells me, on the eve of my departure for New York, that he had had a conversation with Huntington, that Huntington had been informed that I had made a commission on the coal sold to them, and advised that I should see Huntington about it during my visit to New York. At that time Stanford did not believe that there was anything in my actions inconsistent with integrity and fair dealing, and he so expressed himself to me. His advice to me was in accord with the kind feeling he had before and after that time exhibited towards me. After my return from New York and after my relations with his company had ceased, Stanford did not then believe I had wronged him in any way. He still continued to express feelings of friendship for me, and in December, 1875, he borrowed of me \$100,000. Now, one of two things is evident, either Governor Stanford is not a man of the high character he professes to be or he would not have been borrowing money from a man whom he thought had taken secret advantage of the company of which he was President. The complaint further avers and the testimony of the conspirators, Stanford, Crocker and Colton, is that they had knowledge of all the facts in relation to Block 9 about the 1st day of January, 1876—what happened then? Did they or either of them express in any manner to myself that they had any claim against me or any reason to be dissatisfied with any act of mine in reference to this block? Not once; they made no sign, gave no indication that they thought they had been wronged. Stanford and myself continued to meet on our former terms of intimacy. About the middle of January he directed the payment to me by his company of the sum of \$6,000 which had been some time due as the balance on my annual salary. Now this was after he swears he knew all about my alleged acts, both in connection with Block 9 and the coal transportation—all this time no expressions toward me but of good will. About the 1st day of February Stanford pays me \$100,000, leaving \$340,000 due me by himself and his company. Within a few days comes Crocker's quarrel, and his instructions to his employees to violate the contract with me. I struck back by interfering in the so-called Archer bill to regulate the rates of transportation on the railroads in this State, and passed it through the Assembly by a very large majority. Then came the ransacking and criticism of all my relations with them, to see if they could discover any act upon which they could found a plausible complaint that would for the time blacken my character and destroy my influence. As I have said, at this time they owed me \$340,000; \$250,000 was the indebtedness of their company and \$90,000 the individual indebtedness of Stanford, and all of it upon over-due, non-negotiable paper. Bear in mind that this is in the month of February, 1876, a few days before this suit was commenced, when they had quarreled with me and were looking around for some means of gratifying their malice and spite. Did they, even then, set up that they had any demand against me? Not at all. After

some excuses as to its not being convenient to pay just then, they send me their corporate check for \$250,000 and accrued interest, leaving \$90,000 due by Stanford individually, and which was paid on March 31st, 1876, twenty-four days after the commencement of the action and after it was at issue. Counsel has objected to that testimony as not having a bearing upon this case, but I will not stop to discuss its pertinency. Your Honor will perceive it, even if the counsel does not. Now at the time these payments were made, they claim to have been in possession of all the facts that have been testified to here. They had interviewed Cornwall. He had offered, as we think, to supply them with all the coal and all the evidence they wanted. Mr. Tichenor had also been closeted with them, and had made, they say, substantially the same statement as he made here, so that they knew exactly upon what foundation their pretended cause of action rested. It may be, however, that they expected that under the spur of their able and adroit counsel Tichenor could be made to say upon the witness-stand whatever would be necessary to sustain their action. In his direct examination, under the influence of a number of leading and most improper questions, he was fast moulding their case into a shape to suit them.

As the assenting answers fell from the lips of the witness, the counsel smiled blandly, Crocker leered approvingly at him, and all would have been as satisfactory at railroad headquarters as in the most palmy days of the Contract and Finance Company, when Crocker was receiving \$96,000 a mile for doing work upon the Central Pacific Railroad that did not cost over \$16,000, had it not been for the obtrusive cross-examination interposed by the defendant, which effectually shattered the ungainly structure that had been reared upon the unstable foundation of perjury, and which lacked the cement of truth. I say at this time, when they pretend to have had knowledge that they had been wronged, when they knew just what evidence they had to sustain any attack they might make, they paid me this large sum of money upon overdue notes to which any equitable defense they had could have been interposed. If they had believed that this case had any honest foundation, would they not have secured themselves by retaining sufficient of the funds in their hands to cover the amount of their claim? would they, as prudent men—men notoriously sharp as they are—would they have paid all these large amounts of money without a protest—without a word, without some kind of notification that they had some counter claim or demand against me? No, sir; they would not, and it goes to show, and ought to convince you, in the light of all the other circumstances, that this action is simply a malicious prosecution, and I am satisfied that your Honor will so find.

Now, I invite your attention, for a single moment, as to how this charge has been met. Have I waited for the slow process of the law? Have I invoked the law's delay to prevent the plaintiff coming into court and presenting its case, and getting what of right and justice might belong to it? Your Honor knows that I have not. This case was at issue within four or five days after the complaint was filed, and without its being served on me at all. I accepted the service tendered to me by plaintiff through the newspapers. I took the newspaper in which it had published the complaint, and I answered it; not in the newspapers primarily, but first in the office of the Clerk of the Twelfth District Court. I attended here within a few days afterward, which was the first day of the term, and I succeeded in having [this case set for trial, and I was ready then within ten days after the complaint had been filed, to come here and try the issue which had been tendered. I have not sought to prevent this inquiry. Sir, we have heard, in the course of this trial, and in the taking of this testimony, that there are other suits pending, there are other trustees called to account. But they have not been as

anxious as I have to court an inquiry into *their* acts. I say that when the day does come, as it must, will and SHALL come, in spite of all their efforts, assisted by their host of eminent and ingenious counsel to prevent it, that they are compelled to meet their accusers at the bar of public justice, when they are placed under the powerful lens of able and hostile counsel, it will be well for them if they can show, after as rigid and as searching scrutiny into all their acts, into all their antecedents, into all their dealings in their trust capacities, as clear a record as the defendant shows here. If nothing more can be proved against them than has been proved against the defendant in this case, then they have been most grievously and grossly maligned, and it will be fortunate indeed for them that they have been afforded the opportunity for exculpation.

In conclusion of this branch of my argument—for, under your Honor's suggestion, I do not propose to take up the other relating to the coal transportation—I assert, and I assert with confidence, that it is not shown that the price paid by plaintiff for Block 9 was more than a reasonable price, and it appears from the evidence that plaintiff's officers thought so. Stanford testifies that, when he complained that the price was too high, Huntington said "that if the company did not want it he would take it himself." I do not know whether I have brought that to your Honor's attention before, but taking that statement alone, if there was no other evidence in this case at all, if all this 4,000 pages of testimony was wiped out, and we stood upon that statement alone, when the issue is presented and the statement is made that these unsophisticated, simple-minded people were led into the making of this purchase by the wiles and machinations of the defendant; that they did not know what they were doing; that they had been so long under the shadow of the dome of the Capitol at Sacramento that they did not know the ways and doings of this great and wicked city; they did not know the value of that property, and they were entrapped into buying it at a price beyond its value; I say, taking this statement alone, that there was this conversation between the President and Vice-President of this corporation, at which, when the President complained that the price was too high, the Vice-President says: "It is not too high, and if the company don't want it I will take it myself," it must dispose of the issue in favor of the defendant. And this conversation shows that these persons were discussing the subject and using their own judgment as to the advisability of the purchase, and not relying, as they now falsely assert, upon the judgment of the defendant.

That when the purchase of Block 9 was made I was not the agent of any of the corporations or connected with its purchase, and that there was not any concealment or attempt at concealment of the interest that I owned, and I say with all confidence, and I know that I am appealing to your Honor's inward consciousness when I say it, that I stand here discharged of all proof of having committed any fraud in fact or in law, and I say finally that the plaintiff has sustained no damage whatever in the premises and is not entitled to recover any judgment.

I have considered, perhaps at greater length than the patience of your Honor may commend, the evidence in this case, and the motives and animus of the witnesses, and I have endeavored to do it, if not with entire moderation, at least with fairness. There are a great many points which occur to me, which in view of the length of time I have consumed I must leave untouched. I do not feel that I have the right, or that it would be proper for me to consume any more time to the detriment of other suitors and members of the bar. Of course, I expect to hear in the reply of counsel a challenge of every position that I have assumed, but I am satisfied and feel a consciousness that no one of the positions that I have taken can be successfully combatted. He may also

say, and say with truth, that a man who pleads his own cause has the traditional client; that, of course, I am prepared for.

But when all shall have been said that can be said, what judgment will there be left for your Honor to pronounce—can you say from the testimony that I have done anything that an honorable man may not properly do? Can you say that I have omitted to do anything that I agreed to do? Can you say that I was the trusted agent of the plaintiff, and abused my trust? Can you say that for five years I pursued a secret, treacherous and dishonest course? It may be that, in the course of my argument, I have expressed myself with more vehemence of language than the occasion might seem to demand. If so, my warrant for such expression must be found in the importance of this case to me and mine. If I have used strong language I have felt strongly.

I am not here to ask of this Court anything but equal and exact justice—anything beyond that would be as unseemly in me to ask as it would be improper in the Court to grant.

This case means much more to me and mine than it does to the plaintiff.

To the plaintiff it means only whether private spite shall be gratified or baffled; whether the discomfiture of one whom it has attempted to crush shall be achieved or not; whether its infinite arrogance shall meet a rebuff at the hands of Justice, or whether it shall trample on the necks of courts as it has already trampled upon legislatures.

To myself, it means vindication from unmerited slander.

It means a determination of the question whether I shall go hence a crushed, as it is claimed on the other side I already am, or, a vindicated man.

To the whole community, in common with myself, it involves the question whether courts of justice can be used, and the time of its officers occupied for months to the exclusion of bona fide suitors, by the mere power of wealth and arrogance, to gratify malice and revenge.

I am justified in using these words. Your Honor can clearly see, that if there had been no bill before the last session of our Legislature to regulate and cut down the excessive charges on the plaintiff's railroads, this action would not have been brought.

Asking your Honor for nothing but equal and exact justice, I can yet appeal to you as a lawyer, as a Judge, and as a man, to render me that justice as perfectly and as promptly as I would render it to you were I clothed with the ermine and you were standing where I now stand, defending all that you hold most dear on earth.

I cannot doubt, I will not doubt, I never have doubted, what the judgment of your Honor will be no more than I doubt the decision of thousands of your fellow-citizens who are watching this case; no more than I doubt the decision of that august tribunal which will weigh the acts and the motives of the highest and the lowest, that tribunal by which we must all one day be judged with a judgment as unerring as the course of the planets, as impartial as the falling of the rain.

Mr. Cohen was followed by his counsel, the Hon. Delos Lake, and was replied to by Mr. McAllister, for the plaintiff. Immediately on the conclusion of the arguments, Judge Daingerfield rendered JUDGMENT FOR THE DEFENDANT.

In the District Court of the Twelfth Judicial District of the State of California, in and for the City and County of San Francisco.

THE CENTRAL PACIFIC
RAILROAD COMPANY }
vs.
ALFRED A. COHEN.

FINDINGS OF THE COURT.

The above cause having been tried before the Court without a jury, and the evidence on the part of the plaintiff and defendant having been heard and duly considered, the Court finds as facts :

I.

That the defendant was not at the date alleged in said complaint, to wit : in the month of October, A. D. 1869, in the employ of the plaintiff, or of the Western Pacific Railroad Company, either as agent in fact, or attorney-at-law.

II.

That defendant was not employed at any time by the Contract and Finance Company, either as agent or attorney.

III.

That the defendant was never employed by the plaintiff, nor by any of its constituent corporations, nor by the Contract and Finance Company, to purchase any interest in the property known as Block Number Nine.

IV.

That the interest of the defendant in said Block Number Nine was acquired by him by purchase from H. B. Tichenor, on or about the first day of August, A. D. 1868, and prior to any relations or dealings between the defendant and the plaintiff, or any of the constituent corporations of the plaintiff.

V.

That the interest of the defendant in Block Number Nine was purchased by the officers of the Contract and Finance Company and the Western Pacific Railroad Company without any agency or intervention of the defendant.

VI.

That said block was not sold to the Contract and Finance Company at a price beyond its real value, but was sold to said corporation at its fair value.

VII.

That said defendant was not entrusted by the plaintiff, nor by any of its constituent corporations, with the purchase or transportation of coal at any time between the first day of December, A. D. 1869, and the first day of January, A. D. 1876.

VIII.

That neither said plaintiff, nor any of its constituent corporations, paid any increased price for coal, nor any enhanced rate for transporting the same, by reason of any statement, act or default of the defendant.

Wherefore, as a conclusion of law, the Court finds that the plaintiff has no cause of action against the defendant, and that the defendant is entitled to judgment for his costs.

WM. P. DAINGERFIELD,
District Judge.



Hen Dr. Kenfield
Compliments of
Haymond

The Power of a State to Tax the Franchise
of the Central Pacific Railroad Com-
pany considered.

ARGUMENT

OF

CREED HAYMOND,
...

BEFORE THE

Supreme Court of California,

1881.

SAN FRANCISCO:

H. S. CROCKER & CO., STATIONERS AND PRINTERS.

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The Power of a State to Tax the
Franchise of the Central Pacific
Railroad Company considered.

In the Supreme Court

OF THE

STATE OF CALIFORNIA.

CENTRAL PACIFIC RAILROAD
COMPANY,

Petitioner,

vs.

THE STATE BOARD OF
EQUALIZATION,

Respondent.

ARGUMENT

ON

THE POWER OF A STATE TO TAX THE FRANCHISE OF THE CENTRAL PACIFIC RAILROAD COMPANY.

In the orders made by the State Board of Equalization, appears, among other things, an assessment against the petitioner for the WHOLE of its franchise within this State, (Petition, pp. 19 and 22). To the extent of striking out this assessment, such orders must be modified, for

The Central Pacific Railroad Company is one of the means and instrumentalities selected and employed by Congress to carry into operation the powers granted to the General Government. A tax upon its franchise—upon its right to exist—is, within the meaning of all the authorities, a tax upon the means and instrumentalities of the General Government. Without the express consent of Congress, no State can impose such a tax.

ACTS OF CONGRESS INVOLVED.

On the first of July, 1862, Congress, in the exercise of powers that are not now questioned, passed "An Act to aid in the construction of a railroad and telegraph line from the Missouri River to the Pacific Ocean, *and to secure to the Government the use of the same for postal, military and other purposes.*" (12 U. S. Stat., 489.)

The first section of the Act names a number of persons and declares that they, "*together with five Commissioners, to be appointed by the Secretary of the Interior,* and all persons who shall or may be associated with them and their successors, are hereby created and erected into a body corporate and politic, in deed and in law, by the name, style and title of the 'Union Pacific Railroad Company.'" The company thus created is vested with the usual and customary powers of a corporation. The corporation is then expressly authorized to construct and maintain a railroad and telegraph line upon a given line and between certain points named. The amount of the capital stock is next prescribed, and also certain rules and regulations

for the government of the corporation, the management of its affairs and the transaction of its business. Provision is also made for the election of a Board of Directors, *and for the appointment of two additional Directors by the President of the United States, to act as Directors on the part of the Government.* The second section grants a right of way through the public lands, with the further right to take from the public lands, adjacent to the line of the road, materials of every description for the construction of the road, concluding with a promise on the part of the United States that the Indian titles to all lands falling under the operation of the Act shall be extinguished as rapidly as may be. The third section grants to the Company alternate sections of land, on each side of said road, with certain reservations as to mineral lands and lands reserved, or otherwise disposed of, or to which pre-emption or homestead claims have attached. The fourth section provides, among other things, for the appointment of three Commissioners by the President, who are to examine the road, from time to time, and report to him as to the manner of its construction and the progress made therein, with a view to the issuing of patents for said lands, and that all vacancies occurring in said Board of Commissioners shall be filled by the President. The fifth section provides for the loaning of the credit of the Government, in the shape of bonds, and securing the payment thereof by a *first* lien upon the road and telegraph, together with all the rolling stock and other property, and concludes with a provision which has a

most important bearing upon the question in hand, viz. : " And on the refusal or failure of said Company to redeem said bonds, or any part of them, when required to do so by the Secretary of the Treasury, in accordance with the provisions of this Act, *the said road, with all the rights, functions, immunities and appurtenances thereunto belonging, and also all lands granted to the said Company by the United States, which, at the time of said default, shall remain in the ownership of the said Company,* MAY BE TAKEN POSSESSION OF BY THE SECRETARY OF THE TREASURY, FOR THE USE AND BENEFIT OF THE UNITED STATES." This provision is followed by another contained in the sixth section, which provides : " That the grants aforesaid are made upon condition that said Company shall *pay said bonds at maturity, and shall keep said railroad and telegraph line in repair and use, and shall at all times transmit dispatches over said telegraph line, and transport mails, troops and munitions of war, supplies and public stores upon said railroad for the Government,* whenever required to do so by any department thereof, *and that the Government shall at all times have the preference in the use of the same for all the purposes aforesaid.*" Power to consolidate with other companies named in the Act is given in the sixteenth section. The right to connect with the road is given to other companies by the fifteenth section. The President is authorized to establish a uniform width of track, so that the same cars can be run from the Missouri River to the Pacific Ocean, by the twelfth section. The seventeenth section

provides that if said Company shall fail to comply with the terms and conditions of the Act, or to keep the road in repair and use for an unreasonable time, "*Congress may pass any Act to insure the speedy completion of said road and branches, or put the same in repair and use, and MAY DIRECT THE INCOME of said railroad and telegraph line to be thereafter devoted to the use of the United States,*" etc.; and further, that if said roads are not completed "*so as to form a continuous line from the Missouri River to the navigable waters of the Sacramento River, by the first day of July, 1876, said roads, with all their rolling stock, fixtures, etc., shall be forfeited to and be taken possession of by the United States.*" The eighteenth section provides that when the net earnings of the road and telegraph shall have reached a certain per centum upon their cost, "*Congress may reduce the rates of fare thereon, if unreasonable in amount, and may fix and establish the same by law, and may at any time, having due regard for the rights of said companies named herein, add to, alter, amend or repeal this Act.*" Finally, by the last section, the Company is required to make annual reports as to certain matters therein mentioned to the Secretary of the Treasury, for the obvious purpose of enabling the General Government to supervise and control the road and telegraph by legislation and otherwise. (12 U. S. St. at Large, 489.)

In respect to this question of taxation, the Pacific Railroad Acts are upon all fours with the Act by which the Bank of the United States was

established (3 U. S. St. at Large, 266). The plan adopted by Congress for the purpose of establishing the Bank and securing its use to the Government, as a financial agent, is so similar to that adopted in the present case, as to suggest that the former served as a model for the latter. As in this instance, a corporation, with full banking powers, was created. The amount of its capital stock was fixed at thirty-five millions of dollars, of which sum the Government was to subscribe only one-fifth, or seven millions, leaving twenty-eight millions to be taken by private individuals. The affairs of the bank were to be managed by twenty-five Directors, of whom twenty were to be elected by the stockholders and five to be appointed by the President of the United States, by and with the advice and consent of the Senate. The powers of the Directors and the business operations of the institution were defined and restricted. Power was given, with certain restrictions, to establish branch institutions in the several States. The Secretary of the Treasury was authorized to call upon the bank for a statement of its affairs, as often as once a week. For the privileges and benefits conferred by the charter, the President and Directors of the bank were required to pay to the United States a bonus of one million and five hundred thousand dollars, in three equal payments. And it was lastly provided that the books of the corporation should always be open to the inspection of a committee of either House of Congress, appointed for that purpose.

Contrast these provisions with those of the

Railroad Act, to which reference has been made, and it will appear that the interest of the Government in the bank was much less, and the powers over its management and affairs assumed by the Government was much less sovereign than in the case of the Pacific Railroad. The interest of the Government in the bank was but five millions of dollars; to the Pacific Railroad and telegraph it has loaned sixty-three millions in bonds, and has donated thirty millions more in land. As the Government shared in the management of the bank, through directors appointed by the President, so does it share in the management of the Union Pacific, through the same means. As the Government was authorized to watch the operations of the bank, through committees of Congress, and reports by the directors of the bank to the Secretary of the Treasury, so has it watched the construction of the railroad and telegraph, through Commissioners appointed by the President, and so has it, and does it, inspect the management and affairs of the Pacific Railroad and telegraph, through annual reports made by the directors for a time, to the Secretary of the Treasury, but latterly to the Secretary of the Interior. As the Government reserve the power to control the loans and business operations of the bank by legislation, so has it reserved the right to fix and establish by law, *fares and freights* upon the Pacific Railroad. The *sovereignty* asserted over the bank was therefore in no respect greater than that asserted over the railroad; on the contrary, the sovereignty asserted over the railroad is far greater,

in a most important particular. Nowhere in the Act by which the bank was established, was any provision made for the forfeiture of its franchises, or for taking possession of its property by the Government and administering its affairs through other agencies, or the devotion of its income and resources to the use of the United States. Yet all of these Acts, which lie upon the extreme verge of sovereign power, have been reserved by the Government in the case of the Pacific Railroad and telegraph.

It is clear that the Union Pacific Railroad Company is a national corporation, created for the benefit and use of the General Government, in the conduct and management of its postal, military and other affairs. The relation of the Central Pacific to the General Government differs from that of the Union Pacific in one respect only. The Central Pacific was not in the first instance created a corporation by the General Government. It had become a corporation, under the laws of the State of California, prior to the passage of the Pacific Railroad Act.

By the Act of 1862, Congress conferred the same powers upon the Central Pacific which it conferred upon the Union Pacific, annexing thereto the same conditions. In the ninth section of the Act it is provided that :

“ The Central Pacific Railroad Company of California, a corporation existing under the laws of the State of California, are hereby authorized to construct a railroad and telegraph line from the Pacific Coast, at or near San Francisco, or the

navigable waters of the Sacramento, to the eastern boundary of California, *upon the terms and conditions, in all respects*, as are contained in this Act for the construction of said railroad and telegraph line first mentioned, and to meet and connect with the first mentioned railroad and telegraph line on the eastern boundary of California."

Again, in the tenth section, it is further provided :

"And the Central Pacific Railroad Company of California, after completing its road across the State, is authorized to continue the construction of said railroad and telegraph through the territories of the United States to the Missouri River, including the branch roads specified in this Act, upon the routes hereinbefore and hereinafter indicated, *on the terms and conditions* provided in this Act in relation to the said Union Pacific Railroad Company, until said roads shall meet and connect, and the whole of said railroad and branches and telegraph is completed."

In section 16 of the Act of Congress of July 2, 1864, it was provided that upon complying with certain conditions (all of which have been complied with) that the Central Pacific Railroad Railroad Company "shall enjoy all the rights, privileges and benefits conferred by this Act upon the Union Pacific Railroad Company."

THE EXEMPTION CLAIMED.

It has been claimed on behalf of the Central Pacific Railroad Company—and with great plausibility—that by reason of the Acts of Congress relating to it, the General Government has converted it into a National corporation, and that in

form as well as substance, it bears the same relation to the Federal Government and to the States, as does the Union Pacific Company. It is also claimed that the State of California has assented to the adoption. That Congress intended to and supposed it had erected the Central Pacific Railroad Company into a national corporation is evident. Section 17 of the Act of 1862 provides in direct terms for a forfeiture to the United States for non-performance of conditions, of the property and franchises of that corporation, "conditions can only be reserved to the feoffer, donor or lessor and their heirs; but not to a stranger." It would not be competent for Congress to provide for the forfeiture of the franchises of a State corporation to the National Government for non-performance of conditions, nor to provide for the entry of the United States for such conditions broken, for "he who enters for conditions broken shall be in of the same estate he was before."

Wiseman vs. McNulty, 25 Cal., 239.

But whether it be true or not that the Central Pacific Railroad Company has in form been made a Federal corporation, I shall not stop to inquire. The question whether it is or is not a Federal corporation is of minor importance. Corporation or no corporation is not a factor in the solution of the problem.

IT IS AN INSTRUMENT OF THE GENERAL
GOVERNMENT.

The exemption is not claimed upon the ground that it is a Federal corporation, but upon the

ground that by the unquestioned Act of Congress it has been selected as a means and instrument of the General Government to carry into execution the admitted powers of that government. It was authorized to construct and operate a railroad and telegraph line upon the same "terms and conditions in all respects" as the Union Pacific.

These "terms and conditions" constitute the tests whether or not it has been made an instrument of the General Government. It is useless at this point to speculate upon the reasons which led to the enactment of the law of 1862, or what were the purposes had in view, for Congress has declared the reason and purpose in the title of the Act to be to "secure to the Government the use" of a railroad from the Missouri River to the Pacific Ocean "for postal, military and other purposes." To effectuate that purpose Congress created a corporation known as the Union Pacific Railroad Company, and adopted the Central Pacific Railroad Company, and to these corporations, upon the same terms and conditions, intrusted the execution of its purposes. The two companies were charged by Congress with the speedy construction of the road and telegraph line. It was made their duty, when completed, to keep the same in repair and use, so that upon demand of the Government they could transmit its dispatches over the telegraph line and transport its mails, troops, munitions of war, supplies and public stores upon the railroad. To the end that these companies might be in condition to perform

these great governmental functions, aids in lands and bonds were granted; and that they might maintain and operate the vast machine entrusted to their care and be ready at all times to give to the Government its aid in peace and in war, without too great a charge upon the public treasury, they were authorized to transact business for private parties, but were required at all times to subordinate such business to the public duties cast upon them. The Government "must at all times have the preference." At all times both companies are subject to the orders of the General Government, and must, at its command, devote themselves to the performance of their governmental functions to the absolute exclusion of all other business. Not more absolute is the control of the General Government over the officer who commands its steam frigates, than is its control over the agents who constructed and who manage the trans-continental roads. It may, for the purposes of his creation, control every public and official action of a captain in the navy. All this it may do with these corporations, and even more, for it may control their relations with private parties and regulate the terms and conditions upon which they can transact their private affairs. Congress has employed these corporations as a means to carry its powers into execution. Can the State governments destroy either? This is the question upon the solution of which depends the validity or invalidity of the State tax sought to be imposed upon the franchise, or the right to exist, of the Central Pacific Railroad Company.

THE POWER TO SELECT IMPLIES THE POWER TO
PRESERVE.

The power to create implies the power to preserve. The power to destroy, if wielded by a different hand, is hostile and incompatible with the power to create and preserve. Where that repugnancy exists, that authority which is supreme must control, not yield to that over which it is supreme. "These propositions as abstract truths," says Chief-Justice Marshall, (4 Wheat. 426), would, perhaps, never be controverted."

CONGRESS HAD THE POWER TO SELECT.

Are these propositions applicable to the case in hand? Let us consider them separately, and in the order of inquiry the first will be: Had Congress the power to select the Central Pacific Railroad Company and create it an agent of the General Government—to make it one of the means or instruments for the construction of a trans-continental railway and telegraph, and one of the means or instrumentalities by which the use of the same for postal, military and other purposes could be secured to the Government."

At this late date no argument would seem to be necessary to maintain that Congress possessed such powers. The Federal Constitution expressly confers upon Congress the power among others to provide for the common defence and general welfare of the United States; to establish post-roads; to declare and carry on war, and to make all laws which shall be necessary and proper for carrying into execution the powers granted, with

respect to the means by which the powers it confers are to execute the Constitution, has been construed to allow to Congress that discretion which will enable it to perform the high duties assigned in the manner most beneficial. After Congress has acted it is not for the Courts to determine whether the means selected are the best possible. Such considerations are for Congress alone. If the end be legitimate; if it be within the scope of the Constitution, then all means which are plainly adapted to that end, whether better ones could be found or not, may be constitutionally used by Congress.

McCulloch vs. Maryland, 4 Wheaton, 421.

CONGRESS EXERCISED THE POWER OF SELECTION:

We have seen that the declared purpose of Congress in providing for the construction of the trans-continental railway and telegraph was to "promote the public interest and welfare by the construction of said railroad and telegraph line, and keeping the same in working order, and to secure to the Government at all times (but particularly in time of war) the use and benefits of the same for postal, military and other purposes." Was the end a legitimate one? Was it within the scope of the Constitution? In the progress of science railways have become mighty engines in the prosecution of military enterprises. Indeed, their use may be said to have almost revolutionized the art of war. Not only are they proper means if the end be war, but they are admittedly necessary means, without which no

civilized nation would attempt to carry on warfare with another. This being so, then Congress would have the right to construct and to maintain them to subserve the public welfare. The power to construct and maintain necessarily includes the power to determine the mode and means of construction and maintenance and to select the instruments to keep the same in working order. In making this determination Congress created a corporation to construct and maintain the eastern section, and adopted a corporation already in existence to construct and maintain the western section. As to both sections the object of Congress was the same. To authorize some person to construct the road and to impose upon the persons authorized the duty of keeping it in repair and use, so that, whenever required, the "mails, troops and munitions of war" of the Government could be transported over it, and, if necessary, to the exclusion of all other traffic. This was the great purpose and object of the Government, and in this purpose and object Congress found the constitutional authority to act in the premises. The end was not to create one corporation nor to adopt another, but was to create agents, or instrumentalities and means through which the governmental function involved could be exercised. It created one *corporation* and made of it such an instrument of its power. It found another corporation in existence and made it the means by which the power should, in part, be executed. Congress seized upon a State corporation and made it the instrument to execute its

will. Congress by law gave it the right of way over the public lands ; the right to contract debts and secure them by mortgage ; the right to take and hold property ; the right to build railroads in the Territories of the United States ; the right to make contracts ; the right to maintain ferries over navigable waters ; the right to eminent domain ; the right to consolidate with other corporations, and to adopt and use thereafter a corporate name, and to enjoy all the rights, privileges and benefits conferred upon the Union Pacific. Congress, by law, made it the duty of the Central Pacific Railroad Company to keep the road and telegraph in repair and use ; to transmit, on demand, dispatches, mails, troops and munitions of war for the Government, and reserved the right to regulate freights and fares—to enter for condition broken, and to alter, amend and repeal. These rights, privileges, powers and duties, conferred and imposed, make the instrument to bear a wonderful resemblance to a Federal corporation. In these times Courts deal more with substance and less with form in construing laws, and when we remember that no particular form of words or mode of expression is necessary to the creation of a corporation, it is difficult to conceive that Congress intended less than the creation of a Federal corporation. But it is not the name which the instrument bears, but the faculties with which it is endowed and the purposes for which it is used, which gives it immunity. All the rights and privileges above enumerated, all the rights and privileges which the Union Pacific enjoy, are

conferred upon the Central Pacific by the laws of the Federal Government. That the Central Pacific Railroad Company is an agent of the Government precisely as the Union Pacific Company is, to the same extent, and for the same purposes, is not an open question. Such is the judgment of the Supreme Court of the United States. (*Railroad Company vs. Pemston*, 18 Wallace, 32.)

THE STATE CANNOT DESTROY THE AGENT SELECTED.

No one has ever seriously questioned the power of Congress to enact the laws in question, and we may safely assume that Congress, "to promote the public interest and welfare * * * to secure to the Government at all times the use and benefit of the trans-continental road and telegraph," had the right to select the Central Pacific Railroad Company as an instrument—clothe it with the privileges and immunities given by law, and place it in charge of the western section of that road and telegraph line. Can the State destroy this agent? No one would have the temerity to contend that a State could repeal the laws which confer upon the Central Pacific its character as a national agent. Whatever Congress has the power to do the individual States have no right to undo. Its power to select an agent and place it in charge of the machinery of war, like its other sovereign powers, is supreme or it would be nothing. As Mr. Pinckney aptly remarks (4 Wheat., 391): "A power to build up what another may pull down at pleasure is a power which can provoke a smile, but which can do nothing else." If the State cannot repeal the Acts of Congress under which this

corporation now exercises all its functions, it cannot by indirection accomplish the same purpose. This agent chosen by the Federal Government must continue to exist, enjoy its privileges and immunities, and perform its obligations so long as that Government wills. A constitutional law enacted by Congress, to carry into execution the powers vested in the General Government, confers the privileges and immunities, and imposes the obligations, and no State can in any manner retard, impede, burden or control the operation of that law. (*McCulloch vs. Maryland*, 4 Wheat., 316; *Osborn vs. Bank of United States*, 9 Wheat., 738; *Weston vs. City of Charleston*, 2 Peters, 466.) This, says Chief Justice Marshall, (4 Wheat., 436,) is "the unavoidable consequence of that supremacy which the Constitution has declared." And again, (p. 425) "A law absolutely repugnant to another, as entirely repeals that other as if express terms of repeal were used."

THE POWER TO TAX IS THE POWER TO DESTROY.

The power of the State to tax the franchise—the right to exist—of the Central Pacific Railroad Company is incompatible with the power of the Federal Government to adopt and use it as a governmental agent or instrument.

THE EARLIEST ADJUDICATIONS UPON THE SUBJECT BY
THE SUPREME COURT OF THE UNITED STATES.

In expounding the relations which the means, instruments and agencies of the General Government bear to the States, "a splendor of eloquence and strength of argument seldom, if ever, sur-

passed," has been supplemented by judgments pronounced by the most illustrious of the line of great judges who have adorned the American bench. In the investigation before us there are no strange waters to be traversed nor new lands to be explored. The courses have been laid, the paths marked, and if we but pursue them the judgment at which we shall arrive can not be a mistaken one.

In *McCulloch vs. Maryland* (4th Wheaton, 400), the defendant in error, a sovereign State, denied the obligation of the law enacted by the Legislature of the Union creating the Bank of the United States, and the plaintiff in error on his part contested the validity of an act which had been passed by the Legislature of Maryland, taxing the operations of the bank. The first question made in the cause was : Has Congress power to incorporate a bank ? This question the Court answered in the affirmative. In discussing the question the nature of the General Government was inquired into, the conflicting powers of it and the State governments were brought into view, and the supremacy of their respective laws, when they are in operation, settled, and it was substantially held :

1. That the General Government emanates from and its powers were granted by the people ; that though its powers are limited, it is supreme within its sphere of action, and its laws, when made in pursuance of the Constitution, form the supreme law of the land. That there is nothing in the

Constitution of the United States which excludes the use of incidental or implied powers. That if the end be legitimate and within the scope of the Constitution, all the means which are appropriate, which are plainly adapted to that end, and which are not prohibited, may be employed to carry it into effect.

2. That the power to establish a corporation is not a distinct sovereign power or end of the General Government, but only the means of carrying into effect other powers which are sovereign. Whenever it becomes an appropriate means of exercising any of the powers given by the Constitution to the General Government, may be exercised by that government ; and

3. That if a certain means to carry into effect any of the powers expressly given by the Constitution to the Government of the Union be an appropriate measure, not prohibited by the Constitution, the degree of its necessity is a question of legislative construction, not of judicial cognizance.

The power to create a corporation as a substantive independent power does not exist in the General Government. But the Government having the right to do an act, and having the duty imposed upon it of performing that act, must "according to the dictates of reason, be allowed to select the means." In the exercise of the right of selection, it may seize upon any means already in existence, and reasonably adapted to the purpose ; and if no such means are in existence, or the means already in existence are not in the judgment of Congress the best to the end, then it

may bring into existence that artificial being commonly known as a corporation, and make it an instrument through which the powers of government are to be exercised. It was not the fact that the General Government created a banking corporation which constituted that corporation a Governmental agency. The creation of the corporation was a mere incident—the exercise of a power incident to the right of selection. It was the fact that Congress by law had endowed it with certain faculties relative to the fiscal operations of the Government, which threw around it the protection of that Government and shielded it from hostile legislation at the hands of another. Nor is this mere matter of deduction or inference from the opinions of the Court. Chief Justice Marshall declares this to be so. “We do not,” said the Chief Justice, “maintain that the corporate character of the bank exempts its operations from the action of State authority. If an individual were to be endowed with the same faculties, for the same purposes, he would be equally protected in the exercise of those faculties.” *Osborn vs. U. S. Bank*, 9 Wheat., 362-3.

The second question made in *McCulloch vs. Maryland* (4 Wheat. 425,) was whether the State of Maryland might, without violating the Constitution, tax the branch of the United States Bank established in that State?

Counsel for the bank placed its claim to be exempted from the power of a State to tax its operations upon the paramount character of the Federal Constitution. On the part of the State

it was contended not that the States may directly resist a law of Congress, but that they may exercise their acknowledged powers upon it, and that the Federal Constitution leaves them this right, in the confidence that they will not abuse it. In examining these positions and subjecting them to the test of the Constitution, the Chief-Justice, speaking for the Court, says :

“ We must be permitted to bestow a few considerations on the nature and extent of this original right of taxation, which is acknowledged to remain with the States.”

“ It is admitted that the power of taxing the people and their property is essential to the very existence of the government, and may be legitimately exercised on the objects to which it is applicable to the utmost extent to which the government may choose to carry it. The only security against the abuse of this power is found in the structure of the government itself. In imposing a tax the Legislature acts upon its constituents. This is, in general, security against erroneous and oppressive taxation.”

“ The people of a State, therefore, give to their government a right of taxing themselves and their property, and as the exigencies of a government can not be limited, they prescribe no limits to the exercise of this right, resting confidently on the interest of the legislator, and on the influence of the constituents over their representatives to guard them against its abuse ; but the MEANS employed by the Government of the Union have no such security, nor is the right of a State to tax them sustained by the same theory.”

“ Those means are not given by the people of a particular State, nor given by the constituents of the Legislature, which claims the right to tax

them, but by the people of all the States. They are given by all for the benefit of all, and upon theory should be subjected to that government only which belongs to all." (pp. 428, 429.) Again, the Court say: "There is no express provision for the case; but the claim (the claim of counsel of bank to be exempted from the power of the State to tax its operations) has been sustained on a principle which so entirely pervades the Constitution, is so intermixed with the materials which compose it, so interwoven with its web, so blended with its texture, as to be incapable of being separated from it without rending it into shreds. This great principle is, that the Constitution, and the laws made in pursuance thereof, are supreme; that they control the Constitution and laws of the respective States, and cannot be controlled by them." (p. 426.) Again: "That the power of taxing it (the bank) by States may be exercised so as to destroy it, is too obvious to be denied; but taxation is said to be an absolute power which acknowledges no other limits than those expressly prescribed in the Constitution, and, like sovereign power of every other description, is trusted to the discretion of those who use it; but the very terms of this argument admit that the sovereignty of the State in the article of taxation itself, is subordinate to and may be controlled by the Constitution of the United States. How far it has been controlled by that instrument must be a question of construction. In making this construction no principle not declared can be admissible which would defeat the legitimate operations of a Supreme Government. It is of the very essence of supremacy to remove all obstacles to its action in its own sphere, and so to modify every power vested in subordinate governments as to exempt its own operations from their own influence. This effect need not be stated in terms; it is so involved

in the declaration of supremacy—so necessarily implied—that expressions of it could not make it more certain.” (427.)

To give effect to this supremacy the Court construes the Federal Constitution as placing beyond the reach of the State all the powers which are conferred by the people of the United States on the Government of the Union, and all of the means which are selected for the purpose of carrying those powers into execution. It maintains that by so doing relief is had from clashing sovereignty and from interfering powers, “from a repugnancy between a right in one government to pull down what there is an acknowledged right in another to build up—from the incompatibility of a right in one government to destroy what there is a right in another to preserve. We are not driven to the perplexing inquiry so unfitted for the judicial department, what degree of taxation is the legitimate use, and what degree may amount to an abuse of the power. An attempt to use it (the taxing power) on the means employed by the Government of the Union in pursuance of the Constitution is itself an abuse, because it is a usurpation of a power which the people of a single State cannot give.” Again say the Court :

“ We find, then, on a just theory, a total failure of this original right to tax the means employed by the Government of the Union for the execution of its powers. The right never existed, and the question whether it has been surrendered can not arise.” (p. 430.)

Still pursuing the subject, the Court asserts :
 “ That the power to tax involves the power to destroy ; that the power to destroy may defeat and

render useless the power to create ; that there is a plain repugnance in conferring on one government a power to control the constitutional measures of another, which other, with respect to those very measures, is declared to be supreme over that which exerts the control, are propositions not to be denied. * * * The Legislature of the Union alone, therefore, can be trusted by the people with the power of controlling measures which concern all, in the confidence that it will not be abused. * * * The question is, in truth, a question of supremacy ; and if the right of the State to tax the means employed by the General Government be conceded, the declaration that the Constitution, and the laws made in pursuance thereof, shall be the supreme law of the land, is an empty and unmeaning declamation." The Judges were unanimous in the conclusion "that the States have no power, by taxation or otherwise, TO RETARD, IMPEDE, BURDEN, or in any manner control the operations of the constitutional laws enacted by Congress to carry into execution the powers vested in the General Government." (p. 436.)

In *McCulloch vs. Maryland*, the tax involved was a stamp tax sought to be imposed by the State of Maryland upon the paper upon which the notes of the bank were printed. The tax was held unconstitutional, upon the ground that it was "a tax on the operation of an instrument EMPLOYED by the Government of the Union to carry its powers into execution." (p. 437.) It was not unconstitutional because it imposed a tax upon the operations of a Federal corporation, but because it imposed a tax upon "an instrument employed by the Government." The test of

immunity was not the corporate character but the purpose for which it was used by the General Government. The next case in order of time is that of *Osborn vs. U. S. Bank* (9 Wheaton, 738).

The State tax, the validity of which was attempted to be maintained in *Osborn vs. U. S. Bank*, was a tax laid by the Legislature of Ohio upon the right of the branch banks to do business in that State. It seems to have been conceded by counsel for the plaintiff in error, the party maintaining the validity of the tax, that the Government had the right to preserve the bank as its agent or instrument; but a distinction was sought to be made between the tax in question—a tax upon the business of the bank—and a tax levied upon the corporate franchise or right of the agent to exist. The Court held that no such distinction existed. “That to tax its faculties, its trade and occupation is to tax the bank itself; to destroy or preserve the one, is to destroy or preserve the other.” (p. 862.) At this point in the argument we desire to bring into prominence the fact that in *Osborn vs. U. S. Bank*, it was held that there was no distinction between a tax upon the right of the instrument to exist, and a tax upon the operations of the instrument, and that this being so, all that was said in *McCulloch vs. Maryland*, relative to the power of a State to tax the operations of a governmental agent, applies with equal force when right to tax the existence of the agent is in question.

In their order, the next case to be considered is that of *Weston vs. The City of Charleston*, 2d

Peters, 449. This case arose out of an attempt on the part of the City of Charleston to levy a tax of 25 cents upon every \$100 of the 6 and 7 per cent. stock of the United States, owned and possessed within the limits of that city. The Court, Chief Justice Marshall, rendering the decision, held the case within the principle settled in *McCulloch vs. The State of Maryland*, and reaffirmed the opinion in that case. In the argument it was not denied that the State's could not tax any of the instruments or means used by the General Government in the execution of its powers, (p. 479.) But it was contended that only such taxes as were directly laid upon the means or instrument fell within the inhibition of the Federal Constitution. In answer to this argument, the Court said that any law directly obstructing the operation of a Constitutional Act of Congress, or hindering, impeding or burdening its operation, was admittedly void, and that no distinction could be taken between direct opposition and those measures which may consequently affect the means.

After many years had elapsed, and when the great lawyers and judges who had participated in the discussions and decisions before referred to were resting in honored graves, another generation of judges and lawyers came to the consideration of the grave question involved. The Legislature of the State of Pennsylvania passed a law which authorized the assessment of a State and county tax upon "all offices and posts of profit." One, Daniel Dobbins, a citizen and resident of the State of Pennsylvania, a captain in the Revenue

Cutter Service of the United States, commanding the revenue cutter "Erie," on the Erie Station, was assessed under this Act upon the office which he held. He resisted the payment of the tax. Suit was brought in the State Courts to enforce it, and judgment was finally rendered by the Supreme Court of Pennsylvania, sustaining the tax. Capt. Dobbins brought the case to the Supreme Court of the United States by a writ of error. *Dobbins vs. The Commissioners of Erie County*, (16 Peters, 435.) In the Supreme Court of the United States, counsel for the defendant in error admitted that a State tax upon the hull and apparel of the revenue cutter commanded by Capt. Dobbins, would have been unconstitutional for the reason that the cutter "was the 'means' or 'instrument'" of the Government. (Counsel might also have placed his admission upon another ground, *i. e.*, that the cutter was the property of the United States.) But he maintained that the tax by the State was not of such instrument, but of ONE OF HER CITIZENS, whose income was rated to fix the amount of his contribution to the public burden. The Court, after clearing the case of objections which did not relate to the unconstitutionality of the tax, proceeds to discuss the question, "whether the plaintiff is liable to be rated and assessed for his office under the United States, for county rates and levies?"

Say the Court (p. 447) :

"Taxation is a sacred right, essential to the existence of government and the incident of sovereignty. The right of legislation is co-extensive

with the incident, to attach it upon the persons and property within the jurisdiction of a State, but in our system there are limitations upon that right. There is a concurrent right of legislation in the States, and the United States, except as both are restrained by the Constitution of the United States: both are restrained upon this subject by express prohibitions in the Constitution, and the States by such as are necessarily implied when the exercise of a right by the State conflicts with the perfect execution of another sovereign power delegated to the United States. THAT OCCURS WHEN TAXATION BY A STATE ACTS UPON THE INSTRUMENTS, EMOLUMENTS AND PERSONS WHICH THE UNITED STATES MAY USE AND EMPLOY AS NECESSARY AND PROPER MEANS TO EXECUTE THEIR SOVEREIGN POWER. * * * *

Congress has power to lay and collect taxes, duties, imposts, etc., and to regulate commerce with foreign States and among the sovereign States, and with the Indian tribes. Neither can be done without legislation."

The Court held, that to do either a complicated machinery of forms, instruments and persons must be established, and that laws to these ends constitute legislation by Congress in execution of sovereign powers. "They are the means necessary to the allowed end—the end, the great objects which the Constitution was intended to secure to the States in their character as a nation." (p. 448.)

In applying the principles stated to the case in judgment, the Court say: "Is the officer, as such, less a means to carry into effect these great objects, than the vessel which he commands, the instruments which are used to navigate her, or the guns put on board to enforce obedience to the law?"

These inanimate objects, it is admitted, cannot be taxed by a State, because they are means. Is not the officer more so, who gives use and efficacy to the whole?" (p. 448.)

"The unconstitutionality of the tax in question," said the Court, "might be safely put—though is not the only ground—upon its interference with constitutional means which have been legislated by the Government of the United States, to carry into effect its powers to lay and collect duties, taxes, imposts, etc., and to regulate commerce. In our view, it presents a case of as strong interference as was presented by the tax imposed by Maryland, in the case of *McCulloch*, 4 Wheaton, 316, and the tax of the City Council of Charleston, in *Weston's case*, 2 Peters, 449, in both of which it was decided by this Court that a State can not lay a tax upon the constitutional means employed by the Government of the Union to execute its constitutional powers." (429.)

The other ground upon which the Supreme Court of the United States held that the immunity might be tested, was the exemption of the salaries of all officers of the United States from taxation by the States; but the main ground upon which it held it might safely be placed, was that of INTERFERENCE BY THE STATES WITH THE MEANS EMPLOYED BY THE GOVERNMENT OF THE UNION TO EXECUTE ITS POWERS. Bearing this proposition steadily in view, let us now consider whether, if Congress, instead of constructing the revenue cutter "*Erie*" in a navy yard of the United States, had seen proper by law to authorize Capt. Dobbins to construct it, and had loaned him the money of the Government to aid in such construction, and had taken a mortgage upon the

vessel to secure that loan, and had authorized Capt. Dobbins to use the vessel in part in private business, reserving the right to control that business to a certain extent, but requiring him at all times to hold himself and the vessel to which he held the legal title, in readiness to execute the orders of the Government relating to the revenue service upon Lake Erie, and let us further suppose that Congress, instead of fixing his compensation, had allowed him to receive it from the private business in which he was engaged. In this event would the relation of Capt. Dobbins, or of his ship, toward the National Government, have been changed? The relation of the ship in one respect would have been changed, for the Government, instead of holding the legal title to it, would only hold a mortgage upon it.

Whether it still bore to the Government such a relation of means to an end as to exempt it from State taxation, is a grave and serious question, upon which it will be seen during the course of this argument the Supreme Court of the United States is almost evenly divided, but granting for the purposes of the argument, that in both respects the relation of the vessel to the United States would be changed, yet it is clear that the relation of Capt. Dobbins would remain the same. To prove that this is so, we refer again to *Osborn vs. The U. S. Bank*, 9 Wheaton, 863, where it is said :

“ We do not maintain that the corporate character of the bank exempts its operations from the action of State authority. If an individual were

to be endowed with the same faculties, for the same purpose, he would be equally protected in the exercise of those faculties."

"The operations of the bank are believed not only to yield the compensation for its services to the Government, but to be essential to the performance of these services. * * * * The business of the bank constitutes its capacity to perform its functions as a machine for the money transactions of the Government. Its corporate character is merely an incident which enables it to transact that business more beneficially."

"Were the Secretary of the Treasury to be authorized by law to appoint agencies throughout the Union to perform the public functions of the bank, and to be endowed with its faculties as a necessary auxiliary to those functions, the operation of those agents would be as exempt from the control of the States as the bank, and not more so. If, instead of the Secretary of the Treasury, a distinct office were to be created for the purpose, filled by a person who should receive as a compensation for his time, labor and expense, the profits of the banking business instead of other emolument, to be drawn from the treasury, which banking business was essential to the operation of the Government, would each State in the Union possess a right to control these operations?"

"The question on which this right would depend must always be: Are these faculties so essential to the fiscal operation of the Government as to authorize Congress to confer them? Let this be admitted, and the question: Does the right to preserve them exist—must always be answered in the affirmative." (863, 864.)

It having been authoritatively determined in *Osborn vs. The U. S. Bank*, that so far as immunity was concerned, there was no distinction

between a tax upon the means or agent, and a tax upon the operations of the means and the agent—that one was the equivalent of the other—therefore, upon the authority of that case, and upon the case of *Dobbins vs. The Commissioners*, it may be safely asserted that the relation of Capt. Dobbins to the United States would remain unchanged, although the vessel which he commanded was his own private property, and not within the immunity.

Then, how stands the case of the Central Pacific Railroad Company, assuming it to be, strictly speaking, a State corporation only? It is a citizen and resident of the State of California, as Capt. Dobbins was a citizen and resident of the State of Pennsylvania. The Congress of the United States has seized upon it as a means to execute the war power of the National Government, as Congress selected Capt. Dobbins as a means to execute the revenue powers. Congress has placed it in charge of a national work, originating in national necessities, and having as its end the promotion of the welfare of the whole country.

In each case the primary object of the Government was to advance its own interests—in the one to secure a vessel, and the other to secure a road which could be used for national purposes. In both, the person who commands and controls, who gives effect to this Congressional intent, is an agent or means to the end, and must be within the protection of the Federal Government, or the purposes and intent of that Government

would be at the mercy of hostile legislation at the hand of the States.

JUDGMENT OF WAR.

Two generations of judges had pronounced the existence of implied powers and the supremacy of the National Government over the means and agents by which its powers were to be executed. These questions, upon which statesmen had divided and upon which parties had from the beginning been formed, were now at rest so far as rest could be attained through the instrumentality of a Court sitting in peaceful judgment upon the Constitution. When next they were agitated, it was in a forum in which the eloquent persuasions of the advocate gave place to the stern commands of the soldier, and the clash of arms was the substitute for the reasons of the Judge. The last appeal of mankind was taken, and the controversy in the field was marked upon each side with the same pertinacity and ability which characterized its progress in peaceful Court and council. Although the valor of our race gave lustre to a mistaken and lost cause, the judgment of peace was affirmed in the forum of war.

THE TRANSCONTINENTAL ROADS WERE BORN OF WAR.

The transcontinental road, dedicated now chiefly to the promotion of the arts of peace, was born in war. It is true that a few of the prominent men of the nation had long looked forward to such a work; and that the people of California, forming an isolated community, had as early as

May 1st, 1852, through their Legislature, declared "that the interests of this State, as well as those of the whole Union, require the immediate action of the Government of the United States for the construction of a national thoroughfare connecting the navigable waters of the Atlantic and Pacific Oceans, for the *purposes of national safety in the event of war*, and to promote the highest commercial interests of the Republic," AND GRANTED THE RIGHT OF WAY THROUGH THE STATE TO THE UNITED STATES FOR THE PURPOSE OF CONSTRUCTING SUCH A ROAD. (Statutes California, 1852, p. 150.) Again, in 1859, the Legislature passed a resolution calling a convention "to consider the refusal of Congress to take efficient measures for the construction of a railroad from the Atlantic States to the Pacific, and to adopt measures whereby the building of said railroad can be accomplished." (Statutes Cal., 1859, 391.) And at the same session the Legislature memorialized Congress to pass a law *authorizing the construction* of such a road, and asking that lands be granted in aid thereof. (Statutes 1859, p. 395.) These various measures of the State of California are referred to to show that in the judgment of the State the work was a proper one for the Federal Government, and national in its character. But nothing came of these acts and resolves. It was only when war, in fact, was at hand, that the National Government moved in the premises.

We have seen that the State of California had uniformly characterized the work as a national

one. That Congress declared the purpose of the Act of 1862 to be "to promote the public welfare by the construction of said railroad and telegraph line, and keeping the same in working order, and to secure to the Government at all times, but particularly in time of war, the use and benefit of the same for postal and military and other purposes." (Sec. 18, Act of 1862.) Here, then, we have the declaration of the legislative department of both State and Federal Government, that the paramount purpose of the road is a national one; and that the means by which it was to be constructed and used were national means. We come now to consider how the judicial department of the Federal Government has construed the Pacific Railroad Acts, and what that department has said upon the question—whether the transcontinental road is a national machine, and the persons in charge of it agents of the Federal Government, to carry into execution its lawful purposes—whether or not such persons have been selected by the General Government as means to the ends sought to be attained by the Pacific Railroad Acts. In *United States vs. Union Pacific R. R. Co.*, 91 U. S., 79, the Court say:

"In construing an Act of Congress, we are not at liberty to recur to the views of individual members in debate, nor to consider the motives which influenced them to vote for or against its passage. The Act itself speaks the will of Congress, and this is to be ascertained from the language used. But Courts, in construing a statute, may with propriety recur to the history of the times when it

was passed ; and this is frequently necessary, in order to ascertain the reason as well as the meaning of particular provisions in it. *Aldridge v. Williams*, 3 How. 24 ; *Preston v. Browder*, 1 Wheat. 120.

“ Many of the provisions in the original Act of 1862, are outside of the usual course of legislative action concerning grants to railroads, and cannot be properly construed without reference to the circumstances which existed when it was passed. The war of the rebellion was in progress ; and, owing to complications with England, the country had become alarmed for the safety of our Pacific possessions. The loss of them was feared in case those complications should result in an open rupture ; but, even if this fear were groundless, it was quite apparent that we were unable to furnish that degree of protection to the people occupying them which every government owes to its citizens. It is true, the threatened danger was happily averted ; but wisdom pointed out the necessity of making suitable provisions for the future. This could be done in no better way than by the construction of a railroad across the continent. Such a road would bind together the widely separated parts of our common country, and furnish a cheap and expeditious mode for the transportation of troops and supplies. If it did nothing more than afford the required protection to the Pacific States, it was felt that the Government, in the performance of an imperative duty, could not justly withhold the aid necessary to build it ; and so strong and pervading was this opinion, that it is by no means certain that the people would not have justified Congress if it had departed from the then settled policy of the country regarding works of internal improvement, and charged the Government itself with the direct execution of the enterprise.

“ This enterprise was viewed as a national undertaking for national purposes ; and the public mind was directed to the end in view, rather than to the particular means of securing it. Although this road was a military necessity, there were other reasons active at the time in producing an opinion for its completion besides the protection of an exposed frontier. There was a vast unpeopled territory lying between the Missouri and Sacramento Rivers which was practically worthless without the facilities afforded by a railroad for the transportation of persons and property. . With its construction, the agricultural and mineral resources of this territory could be developed, settlements made where settlements were possible, and thereby the wealth and power of the United States largely increased ; and there was also the pressing want, in time of peace even, of an improved and cheaper method for the transportation of the mails, and of supplies for the army and the Indians.

“ It was in the presence of these facts that Congress undertook to deal with the subject of this railroad. The difficulties in the way of building it were great, and by many intelligent persons considered insurmountable.

“ Although a free people, when resolved upon a course of action, can accomplish great results, the scheme for building a railroad two thousand miles in length, over deserts, across mountains, and through a country inhabited by Indians jealous of intrusion upon their rights, was universally regarded at the time as a bold and hazardous undertaking. It is nothing to the purpose that the apprehended difficulties in a great measure disappeared after trial, and that the road was constructed at less cost of time and money than had been considered possible. No argument can be drawn from the wisdom that comes after the fact. Con-

gress acted with reference to a state of things believed at the time to exist ; and, in interpreting its legislation, no aid can be derived from subsequent events. The project of building the road was not conceived for private ends ; and the prevalent opinion was that it could not be worked out by private capital alone. It was a national work, originating in national necessities, and requiring national assistance.

“ The policy of the country, to say nothing of the supposed want of constitutional power, stood in the way of the United States taking the work into its own hands. Even if this were not so, reasons of economy suggested that it were better to enlist private capital and enterprise in the project by offering the requisite inducements. Congress undertook to do this, in order to promote the construction and operation of a work deemed essential to the security of great public interests.

“ It is true, the scheme contemplated profit to individuals ; for, without a reasonable expectation of this, capital could not be obtained, nor the requisite skill and enterprise. But this consideration does not in itself change the relation of the parties to this suit. This might have been so if the Government had incorporated a company to advance private interests, and agreed to aid it on account of the supposed incidental advantages which the public would derive from the completion of the projected railway. But the primary object of the Government was to advance its own interests, and it endeavored to engage individual co-operation as a means to an end,—the securing a road which could be used for its own purposes. The obligations, therefore, which were imposed on the company incorporated to build it, must depend on the true meaning of the enactment itself, viewed in the light of contemporaneous history.

“It has been observed by this Court, that the title of an Act, especially in congressional legislation, furnishes little aid in the construction of it, because the body of the Act, in so many cases, has no reference to the matter specified in the title. *Hadden vs. The Collector*, 5 Wall. 110. This is true, and we have no disposition to depart from this rule; but the title, even, of the original Act of 1862, incorporating the appellee, seems to have been the subject of special consideration, for it truly discloses the general purpose of Congress in passing it. It is ‘An act to aid in the construction of a railroad and telegraph line from the Missouri River to the Pacific Ocean, and to secure to the Government the use of the same for postal, military, and other purposes.’ That there should, however, be no doubt of the national character of the contemplated work, the body of the act contains these significant words: ‘And the better to accomplish the object of this Act,—namely, to promote the public interest and welfare by the construction of said railroad and telegraph line, and keeping the same in working order, and to secure to the Government at all times, (but particularly in time of war) the use and benefits of the same for postal, military, and other purposes,—Congress may at any time, having due regard for the rights of said companies named herein, add to, alter, amend, or repeal this Act.’ 12 Stat. p. 497. Indeed, the whole Act contains unmistakable evidence, that, if Congress was put to the necessity of carrying on a great public enterprise by the instrumentality of private corporations, it took care that there should be no misunderstanding about the objects to be attained, or the motives which influenced its action.

“If it had been equally explicit in the provision regarding the bonds to be issued in aid of the

company, there would have been no occasion for this suit. But even in this particular, looking to the motives which prompted the act and to the objects intended to be effected by it, we do not think there is any serious difficulty in getting at the true meaning of Congress. The act itself was an experiment. It must be considered in the nature of a proposal to enterprising men to engage in the work ; for, with the untried obstacles in the way, there was no certainty that capital could be enlisted. If enlisted at all, it could only be on conditions which would insure, in case of success, remuneration proportionate to the risk incurred."

The object was "protection to the people" of the Pacific Coast. The road was viewed as "a national undertaking for a national purpose." It was a "military necessity." The project "was not conceived for private ends." It "originated in national necessities." "Profit to individuals" was contemplated, "but this consideration does not in itself change the relation of the parties." The "primary object of the Government was to advance its own interests." Individual co-operation was an incident—"a means to an end." That end "the securing of a road which could be used for national purposes." The Central Pacific Railroad Company was one of the "means" which Congress selected to secure the end. Congress charged it with the construction and maintenance of the road, gave it command of a national instrument, and the question now is: Does that corporation in the economy of Government rank with and enjoy the immunities of the Captain of a revenue cutter "on the Erie Station?"

A PAGE OF CONTEMPORANEOUS HISTORY.

Let us glance at another page of contemporaneous history—a page to which the Court in *U. S. vs. U. P. R. R. Co.*, (91 U. S.) does not refer. At the time Congress passed the first Pacific Railroad Act (1862), the two political parties were contending for power in California, one of which with a strong following and led with consummate skill by some of its ablest public men, frankly and boldly denied the power of the Federal Government to wage war to preserve the integrity of the Union against the seceding States. The value of the allegiance of the State to the Federal cause was inestimable. California produced nearly one-half of the gold used in the world's commerce. Her harbors were well adapted to the use of naval warfare. Had this State cast her lot with the Southern States and given to that cause the product of her mines and the use of harbors in which to fit out vessels of war and into which to bring their prizes, a different result might have marked the ending of the strife. To bind this State to the Union by a transcontinental road, considering it as a war measure only, was not only a constitutional measure, but was one eminently wise and judicious. It is conceivable that when Congress selected the Central Pacific Railroad Company as an instrument through which its purposes were to be worked out—that when it charged that company with the custody of this instrument of warfare and constituted it an agent to keep that instrument ready

for use—Congress believed for a moment that the very existence of its agent was at the mercy of a State, the legislative power of which, at the next tide, might be within the control of a party whose avowed purpose was to resist the prosecution of the war in which the Government was then engaged? No historic parallel ever so clearly illustrated the wisdom of the judgments which acknowledged the right of the Federal Government to select the means by which its powers were to be executed, and placed those means beyond the reach of hostile legislation on the part of individual States.

THE LATER DECISIONS OF THE SUPREME COURT OF THE UNITED STATES.

The Union Pacific Railway Company, Eastern Division, is the corporation mentioned in section 9 of the Railroad Act of 1862, as the "Leavenworth, Pawnee and Western Railroad Company of Kansas." It was chartered by the Legislature of the Territory of Kansas, and subsequently by the State of Kansas. The Pacific Railroad Act of 1862 constituted it one of the companies which, in connection with the Union Pacific and Central Pacific, was to construct and maintain the transcontinental road. To the Union Pacific Railroad, chartered by Congress, it bears the same relation as the Central Pacific, with this exception, that the provisions in the Act of 1864, section 16, which provides that the Central Pacific Railroad Company shall "enjoy all the rights, privileges and benefits conferred by this Act upon the said

Union Pacific Railroad Company" had no application to the Kansas Company. After the road was completed through the State of Kansas the Legislature passed a law, laying certain taxes upon the tangible property of the company within the jurisdiction of the State. The payment of these taxes was resisted by the company, upon the ground that it was an agent of the General Government, and that a tax upon its property would retard, impede, burden and control the company in the discharge of its duties and obligations to the Federal Government. The issue thus made came before the Supreme Court of the United States for determination in *Thompson vs. The Pacific R. R.* (9th Wallace, 579). The question for determination, as stated by the Court, was: "Can the right of this road to exemption from such taxation (*i. e.* upon its tangible property) be maintained in the absence of any legislation by Congress to that effect?" (p. 589.) The Court, after reviewing the various cases bearing upon the question, say: "We fully recognize the soundness of the doctrine that no State has a right to tax the means employed by the Government of the Union for the execution of its powers, but we think there is a clear distinction between a means employed by the Government, and the property of agents employed by the Government. TAXATION OF THE AGENCY IS TAXATION OF THE MEANS; taxation of the property of the agent is not always nor generally taxation of the means." (p. 691.) And in the case then in judgment, the Court determined that the tax levied by

the State of Kansas being upon the property, and not upon the agency itself, was not within the immunity, and the Act of the Legislature of the State of Kansas was constitutional, and could be enforced. Some expressions in the opinion delivered by the Chief-Justice in the case just cited led to the belief that the Court might maintain that there was a distinction between the property of the agent, if that agent was a State corporation, and the property of the agent, when that agent was a Federal corporation.

But in the case of *The Railroad Co. vs. Peniston*, 18th Wallace, p. 5, it was held that no such distinction existed, and that the question was not whether it was a Federal or State corporation, but that the immunity rested upon the fact that the person or corporation claiming it had been selected by the General Government as an agent in the execution of its powers. In that case the tax involved was one laid by the State of Nebraska upon the tangible property of the Union Pac. R. R. Co., a corporation created by Congress. The Court in its opinion refers to the case of *Thompson vs. U. P. R. R. Co.*, 9 Wallace, and says: "It is true that in the opinion delivered by the Chief Justice, reference was made to the fact that the defendants were a State corporation, and an argument was attempted to be drawn from this to distinguish the case from *McCulloch vs. The State of Maryland*," (p. 36.) "But," says the Court, "when the case is as in the present case, whether the taxation of property is a taxation of means, instruments or ageneies by which the United States carries out its powers, it is impossible to see how

it can be pertinent to inquire whence the property originated, or from whom its present owners obtained it. The United States have no more ownership of the road authorized by Congress than they have in the road authorized by Kansas. If the taxation of either is unlawful, it is because the State cannot obstruct the exercise of national powers," (p. 34.) "There is no difference which can be pointed out between the nature, extent or purposes of their agency and those of the corporation complainants in this particular case," (p. 33.)

"As was said in *Weston vs. Charleston*, they (the States) can not, by taxation or otherwise, retard, impede, burden, or in any manner control the operation of the Constitutional laws enacted by Congress to carry into execution the powers vested in the General Government. The implied inhibition, if any exists, is against such obstruction, and that must be the same, whether the corporation whose property is taxed was created by Congress or by a State Legislature."

Reference is then made by the Court to the fact that in *McCulloch vs. Maryland*, the tax was upon the operation of the agent; that in the case of *Osborn vs. The Bank*, the tax was upon its right to transact business, and that a clear distinction was taken between the right of a State to tax the operation or existence of the agent, and a right to tax its tangible property within the jurisdiction of the State, and this distinction, says the Court, "so clearly drawn in the earlier decisions between a tax on the property of a governmental agent and a tax upon the operation of such agent, or upon his right to be, has ever since been recognized," (p. 36.)

And again : “ It is therefore manifest that exemption of Federal agencies from State taxation is dependent not upon the nature of the agents, or upon the mode of their constitution, or upon the fact that they are agents, but upon the effect of the tax—that is, upon the question whether the tax does in truth deprive them of power to serve the Government as they were intended to serve it, or does hinder the efficient exercise of their power. A tax upon their property has no such necessary effect ; it leaves them free to discharge the duties which they have undertaken to perform. A tax upon their operations is a direct obstruction to the exercise of the Federal power,” (p. 37). And further: “ In this case the tax is laid upon the property of the railroad company precisely as was the tax complained of in *Thompson vs. The U. P. R. R. Co.* It is not imposed upon the franchises, or the right of the company to exist and perform the functions for which it was brought into being,” (p. 37.)

The cases last cited are in harmony with the earlier decisions, and also with the principle laid down in the case of the *Collector vs. Day*, 11th Wallace, 127, in which it is said : “ The exemption rests upon necessary implication, and is upheld by the great law of self-preservation, as any Government whose means employed in conducting its operations, if subject to the control of another and distinct Government, can exist only at the mercy of that Government. Of what avail are these means if another power may tax them at discretion?” The various adjudications in the National Bank cases, or the reasoning upon which they rest do not impair the scope or vigor of the

principles and authorities cited in their efficient protection from State taxation, of the means and agencies of the General Government used in execution of its constitutional powers. The National Bank cases hold that it is competent for Congress, in its establishment and arrangement of these means and agencies, to concede to the State such measures and modes of taxation as Congress deems consistent with the safety and efficiency of these means and agencies to execute the powers of the General Government. That is, taxation not by predominance of State authority, but by virtue of Federal submission of the subject to State taxation upon motives of Federal policy. But this concession is not a judicial question. The judicial conclusion excludes the taxation of the States from the province of Federal means and agencies, and requires the express assent of Federal authority to support State taxation and fix its measures and its modes. (*Osborn vs. Bank of U. S.*, *supra*.)

In no subsequent case has the force of their reasoning or the weight of the authority of the cases of *McCulloch vs. Maryland*, and *Osborn vs. The Bank of the United States*, been in the least abated, but on the contrary the principles established in those cases stand unbroken and impregnable.

In the *Railroad Company vs. Peniston* (18th Wallace, 5), the Supreme Court by the clearest implication, maintain that if the tax complained of in *Thompson vs. U. P. R. R. Co.*, or the

Railroad Company vs. Peniston had been imposed upon the franchise—the rights of the company to exist—it would have been not a tax within the province of the State Government to impose, but one prohibited by the Constitution of the United States. While upon this question the Court is unanimous, a majority determined that the tangible property of the companies, parties to those suits, was not within the immunity claimed, but the Court divided nearly evenly, the minority holding that the exemption extended not only to the existence and being of the agent, but to all of its property within the States.

THE PETITIONER DERIVES MOST OF ITS FRANCHISES
FROM THE GENERAL GOVERNMENT.

We have in this argument treated the Central Pacific Railroad Company as a corporation, deriving its powers from the State alone. This is not true in point of fact, so far as it was organized under State laws it was with a capital of \$8,500,000, and to build a road from Sacramento City to the eastern boundary of California, a distance of one hundred and fifteen miles. Under the operation of its California charter it could only borrow money to an amount not exceeding its capital stock, and must provide a sinking fund for the ultimate redemption of its bonds. The State granted no power to build any road except from Sacramento to the State line. By the Railroad Act of 1862 Congress granted it the right to build a road and telegraph line from San Francisco to the eastern boundary line of the State,

and thence through the territories of the United States until it met the road and telegraph line of the Union Pacific Company, and gave to it other privileges and immunities of a corporate character, which have been heretofore enumerated. In the Sinking Fund cases (99 U. S., 727, 728, 729,) the Supreme Court of the United States, referring to the Central Pacific Railroad Company, expressly determine that these things were "additions" to the corporate power of the company, and say that "but for the CORPORATE POWERS and financial aid GRANTED BY CONGRESS, it is not probable the road would have been built." It was in this grant of corporate powers, franchises and immunities by Congress that the Court rested the authority of Congress to enact the "Thurman Bill" into a law. If this Court should hold that the immunity from taxation is in any degree dependent upon the source from which the corporate powers emanated, we have in the "Sinking Fund cases" the authoritative announcement of the Supreme Court of the United States that the franchise of the Central Pacific Railroad Company in part finds its source in congressional enactment, and that to the extent of the powers so conferred the franchise is a Federal franchise. This alone would render any scheme of State taxation of the franchise impracticable. How is that part of the franchise granted by the State to be segregated from that part granted by the General Government? Which part of the life of this being is at the mercy of the State? Upon which member of its body may the State Tax

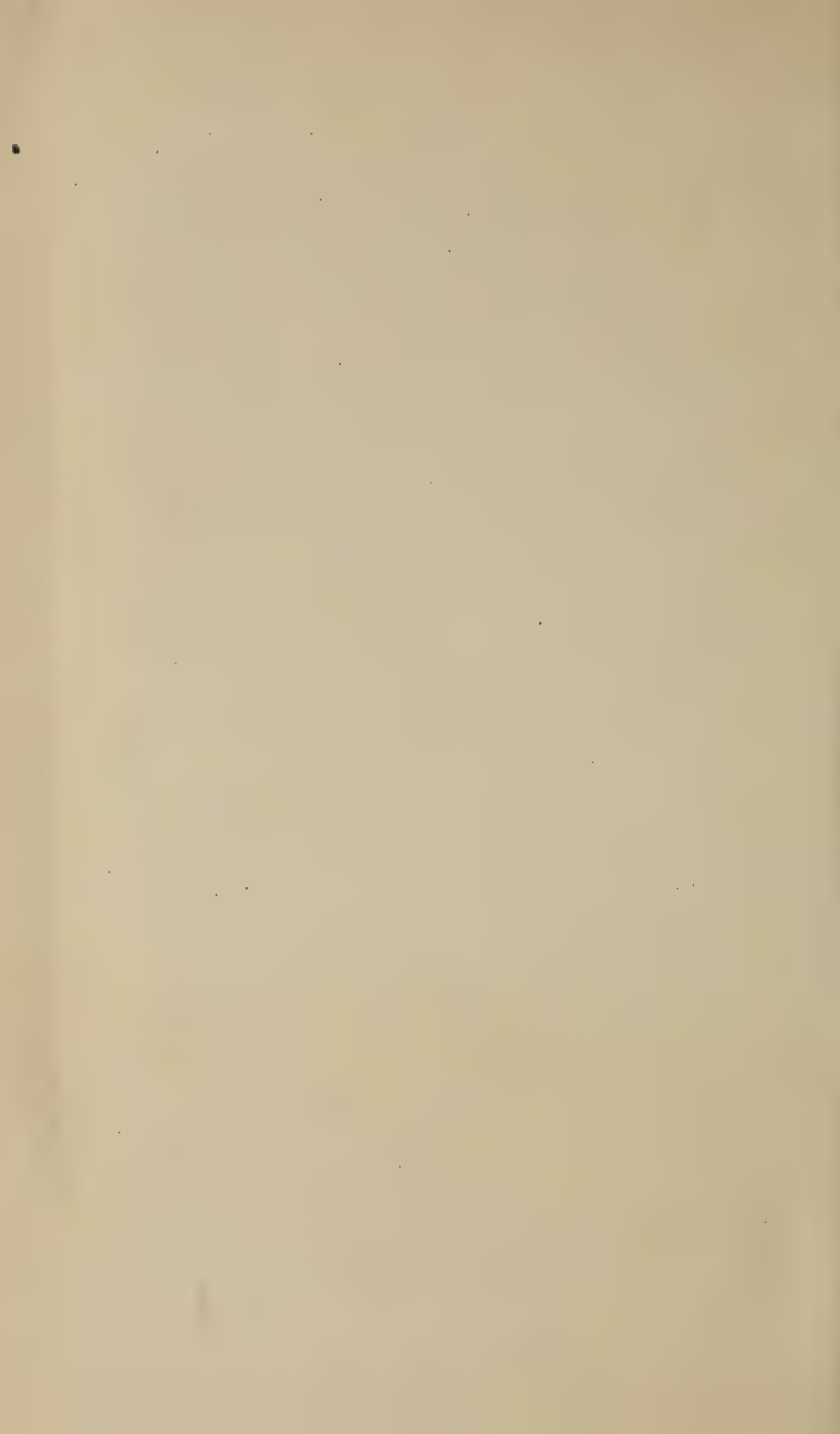
Collector execute his judgment of death? These would be pertinent questions if an attempt in this view of the case had been made to assess and tax *part* of the franchise of the company. But no such attempt has been made. The paltry considerations of "mine and thine" have not agitated the State Board of Equalization, but with characteristic audacity it has seized upon the whole.

The attempt of the State of California to levy a tax upon the existence of an agent of the National Government is a clear case of usurpation—an open defiance of the supremacy of the Federal Government as maintained in every adjudication made by the Supreme Court of the United States upon the subject.

Respectfully submitted,

CREED HAYMOND,

Counsel for Petitioners.

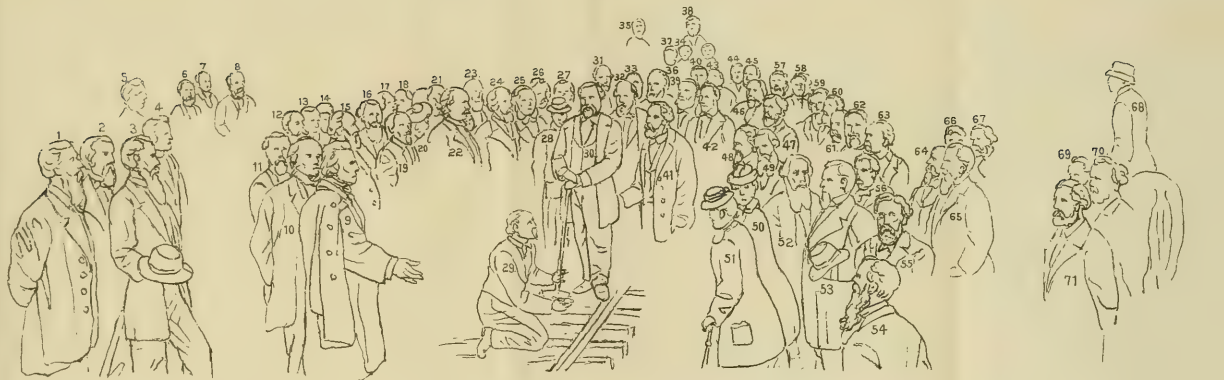


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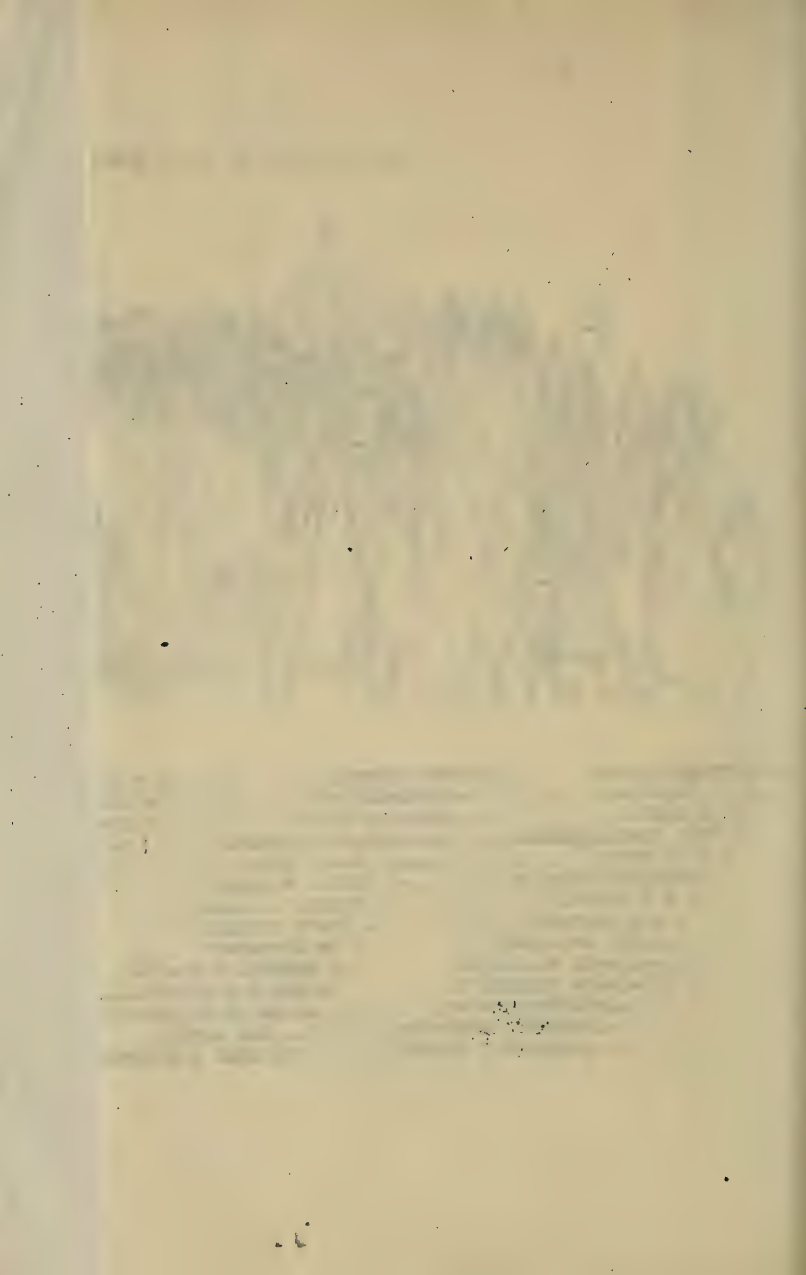
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"THE LAST SPIKE,"

A PAINTING

BY

THOMAS HILL

ILLUSTRATING THE LAST SCENE IN THE BUILDING OF THE
OVERLAND RAILROAD.

WITH A HISTORY OF THE ENTERPRISE.



SAN FRANCISCO,

JANUARY, 1881.



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TRANS-CONTINENTAL REMINISCENCES.

THE ERA OF STEAMER AND STAGE-COACH.

Thomas Hill's painting, "The Last Spike," is intended to commemorate a splendid achievement of engineering science, and a memorable event of history. It vividly illustrates the last act in the building of the Overland Railroad, which in the face of natural and financial difficulties thought insurmountable, was thrown across a continent, connecting two oceans by a thread of steel, and uniting a great nation to what had hitherto been a remote dependency. Only one other momentous incident is worthy to divide with it the honors of a century rich in historic memories, and that is the construction of the Suez Canal. Each of these noble works removed an obstruction from the highway of civilization, and supplied missing links in the great thoroughfare that encircled the world. Before the discovery of gold in the foot-hills of the Sierra Nevada Mountains, more than thirty years ago, California was so far off and so hard of access as to be almost in another hemisphere. By that event a stream of emigration was turned upon its shores, sending a new life among the brown landscapes, scattered ranches, and dusty vineyards, and

rousing sleepy padre and dull ranchero to something like the pains and pleasures of existence. The first gold-hunters went as into an exile which they never dreamed of prolonging beyond a day fixed for return. Their homes were still somewhere near the rising sun, and there intervened pathless deserts, and mountains that pierced the clouds. Faint echoes of the world scarcely reached them. They formed a narrow ribbon of civilization on the western border of the great continent. To the west of them expanded an almost unexplored ocean. Two thousand miles of distance separated them from the Missouri river—a thousand miles of sand and sagebrush, useless except to hold the world together, and a thousand miles more of unreclaimed wilderness ribbed by two lofty mountain ranges. Central Asia was hardly farther from New York as regarded space and means of transport. The Argonauts of '49 came either in slow sailing vessels around Cape Horn, or by those cumbrous "ships of the desert," that crept at a snail's pace across the Plains. Both routes represented from four to six months' weary and dangerous travel. In June, 1849, the sea-passage was shortened to thirty days by the establishment of a line of steamers from New York to San Francisco by way of the Isthmus of Panama. For awhile this line confined itself to a monthly service of mails and passengers, shortly increased to semi-monthly, by increased travel and traffic. And still San Francisco was thirty days from New York! In thirty days, by improved means of conveyance, a traveler could complete half the circuit of the world. In three weeks he could be in Rome, in St. Petersburg, or in the shadow of the Great Pyramid. In a month he could place himself on the banks of the Dead Sea, or on

the shores of the Caspian. The interval of two barren weeks between the steamers made the arrival of each an event in the annals of San Francisco. Its approach was heralded by signals from hill-top to hill-top. The hill-sides were lined with spectators as it entered the Golden Gate, and when it reached its wharf, three-fourths of the entire population of the city were there in eager waiting. Never was a post-office so beset by exiled fathers, husbands, and brothers, as that beside the little block of green called Portsmouth Square, whose business it was to receive and distribute the messages from Eastern homes. There was a line of anxious men stretching further than eye could reach, places of precedence in which were held at a king's ransom. The steamer seemed the single bond that held the gold hunters to their homes. In the days of waiting, the links severed only to be welded again when the next appeared. This state of isolation continued for eight years, or until the establishment of the overland stage line, whose time from the Missouri was thirty days, but whose daily mail service made it seem like a veritable annihilation of space and time. The trip by stage through the wildernesses of Nebraska and Wyoming, Utah and Nevada, had some of the romance of danger, and not a little real peril from flood, precipice, and Indians, who were still sovereigns of the mid-continent. A little later came the Pony Express, the enterprise of a wealthy company, whose method was that of couriers, mounted on fleet horses, relieved at regular stations by new relays and fresh riders. It was the longest courier service ever known, and attended with as much hazard from savages, and scarcely less barbarous highwaymen, as if it were war-time,

and the route lay through a hostile country thickly beleagured by flying outposts of the enemy. Its time was ten days from the Missouri river, and its lowest price for postal service five dollars. All these efforts to shorten time and abbreviate routes between California and the Atlantic States were the outgrowth of characteristic American enterprise, and made in the face of numerous risks and hardships. They still left the State detached from her Eastern sisters, with the wide wilderness between, two oceans to be crossed, and means of transport slow and incompetent in sudden emergency. A stage is the lingering relic of a past era, and a steamer unwieldy compared with the rapid action and elastic serviceability of a railroad. Something more was needed. It still required a month of time to reach San Francisco either from New York by the ocean, or across the plains from the Missouri. In a month, wars might begin and end, kings be driven from their thrones, and nations annihilated. California was defenseless if attacked by a foreign enemy. Her forts might be demolished, and her territory occupied before troops could reach her, or munitions of war come by the Isthmus, the only possible route for bodies of men or quantities of war material.

THE FIRST RAILROAD DREAMERS.

This was the situation in 1860 when the war of the rebellion began, and the threat of secession by friends of the South on the Pacific coast, quickened the sense of danger in the country at large, without making more than a few thoughtful men conscious of the only remedy. That rem-

edy was the uniting of the two shores of the continent by a railroad. California had by this time become invaluable to the Union, not only because of her frontage on the Pacific Ocean, and her prospective agricultural wealth, but for her precious metals, of which the Government stood in sore need, and which, having to be trusted in transit to the Panama steamers, were in as much danger from rebel cruisers as the slow gold-laden galleons of Philip II. from the swift ships of Sir Francis Drake which lay in ambush among the islands of the Spanish main. Only a trans-continental railroad could bind this far-off State to the Union, and such a road seemed to most men who thought of it as the dream of a diseased imagination. The treatment the project at first received is regarded as one of the curiosities of history. It is not known from whom the first suggestion came. It probably occurred to many of those who in early times toiled through the great American desert by the law of mental association that brings visions of green groves and sparkling fountains to the brain of the thirsty traveler in Sahara. How pleasant to the imagination of these voyagers must have been the vision of the lightning train, which brought a hundred of their day's journeys within the limits of twenty-four hours! More practical and further in advance of his generation was John Plumbe, a civil engineer of Dubuque, Iowa, who conceived the idea of an overland railroad in 1836, scarcely half a dozen years after the building of the first railroad in America. He contemplated connecting the Upper Mississippi with the Columbia. It is easy to imagine how hare-brained the project must have seemed to the few capitalists at that time in America, who thought the building of even twenty miles of

railroad a stupendous undertaking. Thomas Benton, in his later years, advocated the scheme, influenced thereto by his son-in-law, General John C. Fremont, who acquired fame and the *sobriquet* of "Pathfinder" from his explorations among the Rocky Mountains and on the Great Plains. It was discussed by Wilkes, Carver, and other men, who were filled with enterprise for which they got little credit, their plans appearing as vain chimeras to the practical men of their unbelieving era. Whitney proposed to build the road for a grant of alternate sections thirty miles on either side, intending to proceed only as the land was settled, which might have insured its completion during the last decade of the century. Daniel Webster deigned to think an overland road possible. Lewis Gaylord Clarke wrote of it in the *Knickerbocker Magazine* when Chicago was a village with scarcely a railroad connecting the Great Lakes with the Mississippi, and half the prairies of Illinois were covered with native sod and wild flowers. But Congress was slow to heed what practical legislators sneered at as visionary. In 1853, \$150,000 was expended to defray expenses in looking for feasible routes. Additional appropriations to the amount of \$190,000 were made in 1854, which served within the two following years for the survey of ten routes, whose *termini* were scattered along the coast of the Pacific from Puget Sound to San Diego, and along the Mississippi from Fulton, Arkansas, to St. Paul, Minnesota. Their length varied from 1,533 to 2,290 miles. The Legislature of California, at the session of 1855-6, fearing lest Congress should relax its energies, gave it a legislative reminder in the form of a preamble and resolution setting forth the great need that existed for an over-

land railroad, and the desirability of its speedy construction. The jealousy of sections and the rivalry of politicians still delayed legislative action, though railroad building was at this time actively stimulated in the East and West, increasing from 8,588 miles in 1850 to 30,598 miles in 1860. The time had arrived for broader views and wiser counsels; for men to formulate theories, and crystalize legislation; for leaders who should be brave of heart as well as cool of head; who should not only have the courage to begin, but the will to prosecute to the end.

THE HOUR AND THE MAN.

The time demanded not only men, but the man, and found him in the person of Leland Stanford of California, without whose calm forethought the overland railroad would never have been begun, and without whose intellectual force and untiring physical energy it would never have been completed. He was then living at Sacramento. He saw the future of the Pacific coast, appreciated the need of the road, and associated with him a few energetic business men who afterwards formed the Central Pacific Railroad Company. Mr. Stanford conceived the plan, which slowly gathered into form. The manner in which the idea occurred to him, and finally shaped his resolution, points the moral of the acorn and the oak. Trade on the slopes of the Sierra Nevada Mountains, and beyond them in Nevada, was then carried on by ponderous freight-wagons drawn by long teams of horses or mules. Passing the store of Mr. C. P. Huntington one day, he saw one of these unwieldy vehicles loading for

Virginia City. The sight brought forcibly to his mind the advantages of the swifter mode of travel and traffic, and entering the store he broached the subject to Mr. Huntington. The seed fell on fruitful ground. That evening the latter called by appointment at Mr. Stanford's house, where the conversation begun during the day was continued till after midnight. The next evening Mark Hopkins came with Mr. Huntington, and in a conversation protracted till the small hours, the three gentlemen thoroughly discussed the business interests of California, the imperative necessity of an overland road to both the eastern and the western sections of the country, and the means by which it could be built. A reconnoissance of routes had already been made by Mr. Theodore D. Judah, who had vainly endeavored to interest the people of San Francisco in the project. He chanced to be then in Sacramento, and having been introduced to Mr. Stanford by Mr. James Bailey, was asked to be present at the meetings in whose discussions Mr. Charles Crocker had now begun to participate. As the result of many conferences Mr. Judah was sent to make a more thorough examination of the Sierra, money to defray his expenses having been contributed by the few gentlemen interested. He fixed upon the route which forms part of the present line. It was approved by the little group of projectors at Sacramento, and a bill was drafted in their office, which formed the basis of that afterwards passed by Congress. While these preliminaries were in progress, the crisis had come which at once furnished to the country the impelling motive for building the road, and at the same time impaired its ability to accomplish so vast an undertaking. The original

incorporators and Board of Directors at this time included Leland Stanford, C. P. Huntington, Mark Hopkins, Charles Crocker, E. B. Crocker, A. P. Stanford, and Charles Marsh, Mr. Stanford being President, Mr. Huntington Vice-President, and Mr. Hopkins Treasurer.

TAKING LEGISLATIVE FORM.

The legislation which resulted in the construction of the Pacific Railroad was passed after much hard personal effort, and anxious diplomacy, at the second session of the Forty-second Congress, 1861-2, and was largely due to the exertions of Hon. A. A. Sargent, member of the House of Representatives from California, who was inspired not only with patriotism, and regard for the interests of his State, but with implicit confidence in the skill and enterprise of those who had undertaken to build the western half of it, which included the engineering difficulties of the Sierra Nevada mountains. There were many reasons why the time chosen to begin the work was unpropitious. The fate of the Union was being decided on the battle field, the treasury was subjected to an enormous strain, and the attention of Congress was engrossed by the work of constructing new systems of finance and taxation to meet a terrible emergency. On the other hand, the moment had its advantages. The author of the successful measure forcibly urged that the secession of the South and the danger of California proved the road to be a military necessity to bind together the two coasts of the continent; the new habit of great expenditure rendered less startling the amount required to build it, and the absence of

Southern Representatives from the halls of Congress prevented a serious contest in respect to competitive routes. The bill that finally became a law was introduced into the House of Representatives by Mr. Sargent on the fourth of March, 1862, and referred to the Pacific Railroad Committee, by whom it was promptly considered and reported on ten days later, and made a special order for March twenty-fifth. Its consideration was not reached, however, until April eighth, when it was sent to the committee of the whole. Spirited debates followed, in which its enemies developed so much strength as to seriously alarm its friends and advocates. Several adjournments were had, and efforts were made to postpone further discussion till the following December, which would have buried it forever. Friendly vigilance and judicious management at last brought their due reward, but not till after long debates on the ninth and tenth of April; a week's postponement "to give time to consider," which was extended to the twenty-eighth of April, at the expiration of which period three days more of heated discussion ensued, only ended by a motion of Mr. Campbell, of Pennsylvania, Chairman of the Pacific Railroad Committee, to limit the speeches to five minutes. This rule disheartened the opposition, and made the end visible. It checked the torrent of objection raised by friends of adverse projects, and of skeptics, who believed all moneys appropriated to an overland railroad, would be buried in the sands of the desert, and brought the bill to its passage, which was accomplished May sixth, by a vote of 79 ayes to 49 noes. It passed the Senate with a few amendments, and after long discussions, on June twentieth, by a decisive vote of 35 ayes

to 5 noes. The House concurred in the Senate amendments a few days later, and the bill became a law by the signature of Mr. Lincoln on the first of July, 1862. By this law numerous persons, with five Commissioners to be afterwards appointed by the Secretary of the Interior, were created a corporation, called the Union Pacific Railroad Company. To this corporation right of way was given for a railroad from the Missouri river to the navigable waters of the Pacific ocean, with five alternate sections of land on either side of the line. United States six-per cent. currency bonds to the amount of sixteen thousand dollars to the mile, were to issue to the company, which aid was doubled and trebled for certain difficult and mountainous portions of the route. These bonds were made a first-mortgage lien on the road. The Central Pacific Railroad Company, a California corporation had a similar grant, with leave to commence at the Pacific end, each company to build toward a common point, that point to be relatively east or west in mid-continent, according to the means, skill, and enterprise of the rival corporations. The great and continual objection to this most desirable legislation was the continued assertion in Congress that the road could never be built because of insuperable obstacles. Fearing it would be begun at both ends and be discontinued, the one line in the Sierra Nevada, and the other in the Rocky Mountains, Mr. Kellogg of the House offered an amendment requiring forty miles of the central division to be finished first. This would have rendered necessary the carting of rails, and other material many hundred miles into the desert. The proposition was aptly compared by Thaddeus Stevens to the subterranean efforts of an over-acute squirrel which should

begin at the bottom of its hole and burrow upwards to the surface. In 1864 Congress modified the Act empowering the companies, by doubling the land-grant, authorizing them to issue their own bonds to the extent of the Government subsidy, and subordinating the lien of its own bonds to the bonds of the company. Under this generous legislation, which was not further changed, the two companies began and completed the Pacific railroads. Among the most earnest friends of the road, pending the enactment of the needful laws, was Mr. Judah, who, having made the preliminary survey, was well informed in respect to all incidental matters of route and expenditure, and being secretary to both the Senate and House Pacific Railroad Committees, was in a position to aid in removing legislative friction. Mr. James Bailey rendered Mr. Judah valuable assistance. Senator McDougall, of California, was active in his friendship, and Senator Wilson said, in speaking to the bill, "I give no grudging vote in giving away either money or land. I would sink \$100,000,000 to build the road, and do it most cheerfully, and think that I had done a great thing for my country. What, indeed, are \$100,000,000 in opening a railroad across the central regions of the continent that shall connect the Atlantic and Pacific, and bind us closer together? Nothing."

BREAKING GROUND.

The legislation had taken form, but the road was still a theory. There were 1,900 miles of it to be built, and there was as yet no money except the private fortunes of the few leading men in Sacramento, which amounted in all to less

than \$400,000. The people of California seemed not to be aware of what was being done for them. Their apathy was depressing. Fearing that the stock would be taken too hastily by eager capitalists of the Bay, the books were opened a week in advance at Sacramento, and then taken to San Francisco, where the plan of subscription had been freely advertised. The first day no one entered the office. The second day a Frenchman came and subscribed ten shares, the only stock taken in San Francisco, except by A. P. Stanford. On the third day Gov. Stanford sallied forth to discover the reason for this plentiful lack of enthusiasm. He met with universal skepticism and distrust. No one thought the road would be built. A speculator asked when it would be completed, and being told in ten years, sneered at the investment as a poor one in a city where capital at the moment was bringing a return of three per cent. a month. The route by Dutch Flat, chosen by Mr. Judah, was unpopular, that following the line of the old stage road through El Dorado County being preferred, some regarding it as more feasible, and others having interests along it which they wished conserved. The managers were not, however, daunted either by enemies in the camp or by the mountain wall that rose before them. They determined to begin their work at once with the limited amount of capital gathered among themselves, subscribed by citizens of Sacramento, and furnished by Sacramento and Placer counties. January eighth, 1863, ground was broken at the foot of K street in Sacramento, with appropriate ceremonies, in which Mr. Stanford, then Governor of California, the Legislature, State officers and a large concourse of people participated. The day was pleas-

ant, but other conditions were unpropitious. It was during the season of freshet, and water stood over the ground selected for the ceremonial. Ladies could not approach the speakers' stand, but sat within hearing distance in carriages whose wheels were half concealed beneath the surface of the water, or stood on the balconies of buildings that commanded a distant view of the scene. Hardier male spectators hovered on the brink of turbid pools, or perched on bales of hay thrown with wasteful extravagance into the quagmire. The platform was suitably decorated with the national colors, the star-spangled banner being placed where it would be convenient for reference. The exercises were prefaced by a speech from Governor Stanford, who said:

Fellow Citizens: I congratulate you upon the commencement of this great work which, in its results to the State of California, to the Pacific Coast, and to the nation itself, is to be what the Erie Canal was to New York and to the Western States. The work will go on, from this side to completion, as rapidly as possible. There will be no delay, no halting, no uncertainty. We may now look forward with confidence to the day, not far distant, when the Pacific will be bound to the Atlantic by iron bonds that shall consolidate and strengthen the ties of nationality, and advance with giant strides the prosperity of our State and our country. The blessings which are to follow the completion of the work which we this day inaugurate, should be fully estimated. Agriculture, commerce, manufactures, wealth and population will feel the influence, and will commence with it a new era of progress. And we may rest assured that these results will be equal to the magnitude of the undertaking, which is one that will shed lustre upon the enterprise, the energies, and the wisdom of our people. A few short years since, the pioneers of our State looked down upon a field, wild, but magnificent, and unexplored. The beautiful river at our side floated upon its bosom only the light canoe and reed-raft of the untutored native. But under the stimulus of American energy how changed the scene! The stream, from its hith-

erto clear und undisturbed repose, is changed to a busy channel bearing the evidences of labor in the distant hills. With the pioneer appeared upon its surface the heavy and cumbrous barge, followed by the slow-sailing craft, and soon by the noble steamer freighted with the wealth of a prosperous State, and alive with travellers urging that prosperity to its farthest limits. The Pacific Railroad will insure still another change; the wealth and the commerce of the East and the West is to float upon its waters, and it is to behold the busy denizens of two hemispheres in their constant travel over the great highway of nations. It is to realize all this that we are assembled here to-day, and we should be happy in the enjoyment of so great and glorious a privilege. I feel proud that the ground in the progress of the construction of the Pacific Railroad is first broken by my hand. As emblematical of the importance of the work, and of its appreciation by the people of the State, and their determination to perform what is now undertaken, it is meet and proper that the Governor of the State should be present and perform the first act of labor, and that we should invoke God's blessing upon the undertaking.

Prayer was offered by the Rev. J. A. Benton, of Sacramento, after which a wagon loaded with gravel, was driven into the slough, and its contents shoveled out at the required spot by the Governor's stalwart arm. Speeches were then made by A. M. Crane, President *pro tem.* of the Senate, J. H. Warwick, of Sacramento, J. A. Banks, Assemblyman, from San Francisco, William H. Sears, Assemblyman, from Nevada County, Walter Van Dyke, Senator from Humboldt County, Dr. J. F. Morse, of Sacramento, Charles Crocker, of the railroad directory, and Hon. Newton Booth, then occupying a seat in the State Senate. Mr. Booth was warmed to unusual rhetorical earnestness by the significance of the occasion. The following is the peroration of his brief but very pertinent address:

* * * * *

You, Sir, to-day, have inaugurated a more glorious work—a work whose beneficent influences shall last when the names of Egyptian kings and dynasties shall be forgotten. Hail then, all hail, this auspicious hour! Hail this bond of brotherhood and union! Hail this marriage tie between the Atlantic and Pacific! Hail, all hail, this bow of promise, which amid all the clouds of war is seen spanning the continent—the symbol, the harbinger, the pledge of a higher civilization, and an ultimate and world-wide peace! On the fourth day of July, 1876, one hundred years after the Declaration of Independence, this magnificent work will have been completed. Then the day of jubilee, so eloquently described by one of the first speakers, will indeed arrive. But in the multitude that will meet around Independence Rock, will be not only the inhabitants of New York, and Boston, and Chicago, and St. Louis, but the people of New Orleans and Savannah, and Charleston, and representatives of all this great country, then free, united, happy, and peacefully reposing beneath yon starry folds.

THE LEAN EXCHEQUER.

The scene furnished ample material to the hostile humorists of the day, who derided the formal shoveling of a little earth into a hole on the river bank, and predicted disaster for the enterprise. A few months later the place of the ceremony was one of the busiest spots on the continent. In October the first shipment of rails arrived, having come more than 19,000 miles around Cape Horn. The company was in admirable order so far as organization was concerned, and ready for business to the full extent of its exchequer, which had an unexpected leanness. Governor Stanford made a brief statement of available means in a letter to a San Francisco journal published in November, 1863. Therein he stated that of the \$1,000,000 expected from citizens of Sacramento, \$800,000 had been actually subscribed. Sacra-

mento county had given \$250,000 by a vote of its electors. The gift of Placer county was \$300,000. He complained of the apathy or hostility of the authorities of San Francisco, who refused to issue the bonds for the \$600,000 voted by the city, which were made available only after long delay, and under judicial pressure. The State had promised \$10,000 per mile as the road progressed. The work proceeded under these financial disadvantages, and was energetically pressed. In June, 1864, the road had reached Newcastle, forty miles from Sacramento. Here it came to an almost absolute pause. There were no means to proceed further. C. P. Huntington was laboring in New York and Washington with desperate energy, but unsatisfactory results. Government aid came slowly. In painful discouragement Governor Stanford returned to San Francisco, and offered the controlling interest in the road to any set of capitalists who would raise sufficient money to carry it across the Sierra. He met with no response. It was a faithless generation. At length, and after the most herculean efforts, the financial crisis was passed, and operations recommenced.

SCALING THE MOUNTAIN WALL.

The Sierra was to be scaled by the narrow dividing ridge between the American and Bear rivers, which allowed little variation of the line, and made the gradients exceedingly difficult. The ascent was 7,000 feet in one hundred miles, but the troubles of the work were not alone from steepness of grade. They were of many kinds, and of a nature to appal the stoutest hearts. There was first the cutting and

carving of a granite mountain, whose sides were irregular and corrugated with deep valleys and high intersecting ridges. Miles of this mountain must be tunnelled, miles more cut down leaving the granite towering like a wall on either hand. Sharp curves were to be made round capes of lofty precipice. Culverts hundreds of feet long were to be constructed with heavy incline. Miles of trestle-work must be built, depressions filled, embankments raised, airy bridges thrown across deep chasms, and all this was to be repeated up the entire rugged mountain-side from the valley of the Sacramento to the summit, a mile and a half above the level of the sea. At an elevation of 5,000 feet the snow-line was passed, and thereafter snow-sheds must be erected to protect the track during the long winter. The work of getting material to the place where it was needed was an obstacle almost as imposing as the Sierra. It had to be brought nearly 20,000 miles by sea and land, that for the last hundred miles excepted, which was sent by steamer and crossed the Isthmus. Add 5,000 miles and you have the circuit of the world. Labor was difficult to get and hard to control until the arrival of the Chinese. Powder doubled in value. It was an important item of expenditure. The powder bill for one month reached \$54,000. The great demand for locomotives caused their makers to ask a double price. Railroad iron cost \$150 per ton,—triple its present value. Freight increased from \$18 to \$45 per ton, and marine insurance rose from $2\frac{1}{2}$ to 10 per cent. Everything by ocean had to be reshipped at San Francisco for Sacramento, and reshipped at Sacramento for the front. Hundreds of millions were needed to accomplish all this, and hundreds of thou-

sands dropped slowly, and after the manner of a church contribution into the treasure-box of the managers. It is susceptible of proof that the work done between Sacramento and the summit of the Sierra would have graded a track from that point eastward to the Hudson river. In September, 1864, the road reached Alta, 70 miles from the starting-point, and in December, 1867, crossed the summit 140 miles from Sacramento, having penetrated fifteen tunnels, and overcome an average elevation of $66\frac{1}{2}$ feet to the mile. The battles of the road were fought by an army of laborers, who charged the mountain and invaded the desert that lay beyond it. Fifteen thousand graders led the van attended by auxiliaries, camp-followers, and officials to the number of 10,000. Five thousand teams were employed in moving material and in other necessary labor. The cuts and hill-slopes were covered with workmen as locusts cover a patch of green on a Nebraska prairie. The forests resounded with the axe of the woodman, the crash of falling timber, and the whir and clatter of saw-mills. It was a work of magnitude to feed this advancing host, and to quench its thirst after it pitched its tents in the sand-wastes was even more troublesome, water having to be brought in some cases a distance of twelve miles.

FRIENDLY RIVALRY OF CORPORATIONS.

The Union Pacific Railroad Company did not begin their work until 1865, having waited until sure that their more energetic rivals would be able to pass the Sierra. That feat in a fair way to be accomplished they thought the trans-continental road an engineering possibility. Having

commenced work they pushed on in haste, and completed three hundred miles across the flat prairies of Nebraska during the first year, still hoping to span the Great Desert and meet the Central Pacific at the eastern foot of the Sierra. The mountains were crossed sooner than they expected. They had not looked for such pluck and energy. In the race that ensued toward a point of meeting, they had every advantage—unbroken connection with the East, short and easy means of conveyance for their material, and prairies, plains, river-banks, and a range of mountains of comparatively easy ascent, over and along which to lay their track. Upon the speed with which either company advanced, depended not only the amount of its land-grant, but future questions of adjustment of rates of freight and travel, and of related lines of railroad. There followed some marvelous feats of track-laying. The Union Pacific laid six miles in one day. The Central Pacific laid seven. The Union Pacific surpassed this by half a mile, beginning at three o'clock in the morning, and ending at eleven at night, and were exulting in their victory when they received word from the rival superintendent that his people intended to lay ten miles. A wager of \$10,000 was laid by Mr. Durant, of the Union Pacific, that they could not. The workmen of the Central Pacific made the necessary preparations, and the feat was successfully accomplished on the 29th of April, 1869, between sunrise and sunset—that is, between half-past five in the morning, and half-past six in the evening. The attempt could not have been longer postponed, for only fourteen miles remained to close the gap between the ends of the two roads. The conditions were difficult, for the level regions having been

passed, the ten miles that must be used for rapid track-laying, was on the western slope of Promontory mountain, and had heavy curving grades. Work began at sunrise, the ground having been graded and the ties placed in position. At a signal the cars loaded with rails moved forward. Four men, two on each side, seized with their nippers, the ends of the rails, lifted them from the car, and carried them to their place, the car following steadily over them as fast as laid. Behind came a band of men who attached the plate, and put the spikes in position. One force of Chinamen drove the spikes home and another with shovels, picks and other implements ballasted the track. Every one was on the alert, and the work proceeded at the rate of 144 feet of track per minute. Eight miles was laid before resting; the rest finished more leisurely afterwards. To show that the work was solidly done, an engine was run over the ten miles of new track immediately afterwards, at the rate of forty miles an hour. Even the Chinese laborers co-operated with enthusiasm, and showed remarkable powers of endurance. No such feat of railroad-building had ever been known. Ten miles of railroad requires a vast amount of material. On this occasion 4,000 men were constantly employed, who handled in this brief time 25,800 cross-ties, 3,520 rails, 55,000 spikes, 7,040 fish-plates, and 14,080 bolts, weighing 4,362,000 pounds. The Overland Railroad might now be considered finished. It had astonished the scientific and won the admiration of the world. The managers of the Central Pacific had builded better than they knew. The little knot of men that met in the Governor's office, at Sacramento, discussed questions of policy, and trembled at difficulties that now a breath would

dissipate, had established rules that were to be the principles of the future. Had they hesitated they would have been lost. Had not the Central Pacific been begun at the opportune moment, or had its projectors paused, dismayed at the obstacles encountered west of the summit of the Sierra, no road across the continent would have been built for a quarter of a century. The Northern Pacific would now be the baseless fabric of a vision, the Canadian Pacific a figment of the imagination, and that through Arizona and New Mexico would have remained a mirage on the horizon of southern deserts. Railroad-building everywhere would have met with a serious reverse. San Francisco would have remained a distant and poorly defended outpost, and California would have continued undeveloped, and spread the panorama of her beauties before a straggling procession of tourists, a beggarly array of valetudinarians, and her own limited and slowly increasing population.

LAST SPIKES, AND FINAL RAILS.

It only remained to lay the last rail, for which preparations were made on the 10th of May, 1869, at Promontory Point, the place of meeting, eighty miles west of Ogden, and 804 miles east of San Francisco. Two lengths of rail had been left by each road for the final ceremony, the ground being still unleveled and unprepared. The day fixed was pleasant, like the average summer days of the broad Utah deserts. The residents of Salt Lake valley, and of the neighborhood, which meant within a radius of a hundred miles, began to gather early. At a quarter to nine a train arrived

bringing guests of the Central Pacific from Nevada and California. Two trains came from the East a little later bringing the officers of the Union Pacific with their friends and guests from Eastern cities. The gathering gradually increased until it numbered more than a thousand persons. At quarter before eleven a detail of Chinese graders began to prepare the road-bed for the ties. Half an hour afterwards a second train from the west reached the spot with Governor Stanford and other officers of the Central Pacific, and those specially invited. They had risen to the full height of the occasion, and, deeming the event worth special celebration, had come prepared with costly ceremonial ties, spikes, and hammers, presented by enthusiastic friends, and drawn by an engine gay with tri-colored flags and ribbons. The event had not so deeply impressed the managers of the Union Pacific. They had never been separated from the East, and could not feel the pleasure of long isolation ended. They came, therefore, unprepared for celebrating except by a collation, and a little unpremeditated eloquence. To give the incident greater significance arrangements had been made to have the last rails of the Union Pacific laid by Europeans, and of the Central Pacific by Asiatics, the foremen in both cases being Americans. When everything was ready the engines of the two roads moved forward till only ninety feet apart. In the meantime preparations had been made by electricians for the general participation of the country. Word was sent to Washington before noon that the driving of the last spike which united the two oceans would be instantaneously communicated to all telegraph offices. A crowd at once gathered about telegraph headquarters there. The

general manager suspended a large ball without the building to be detached and dropped in sight of every one at the first tap of the hammer. Wires were extended to the bell of the Capitol. Connection was made with the main lines of the country, and the various offices were notified that preparations were complete. New Orleans, New York, and Boston at once responded "ready!" The wires in San Francisco were connected with the alarm-bell in the great tower of the Fire Department, and so adjusted that the first stroke of the hammer on the last spike should fire a parapet gun at Fort Point at the entrance to the Golden Gate. There were two spikes of leading historical interest, one of gold given by David Hewes of Sacramento, the other of silver, presented, with a silver hammer, by Nevada. The gold spike was about six inches in length, half an inch square, and made of four hundred dollars' worth of California gold. The first face had inscribed on it the names of the officers of the road. The second face bore the names of the directors. The third had the words, "May God continue the unity of our country as this railroad unites the two great oceans of the world," and on the fourth, "The Central Pacific Railroad; ground broken January 8th, 1863; completed May 10th, 1869." At the end was a nugget afterwards detached, and made into four rings which were presented severally to Oakes Ames, President Grant, Secretary William H. Seward, and Gov. Leland Stanford. Each had two facets, one set with moss agate to symbolize the Rocky Mountains, the other with gold quartz to symbolize the Sierra Nevada.

LIP AND WIRE SERVICE.

When the engines had been placed, the crowd fell back to make room. Prayer was offered by Rev. Dr. Todd, of Pittsfield, Massachusetts. Dr. Harkness of Sacramento, presented the gold spike to Governor Stanford, saying :

Gentlemen of the Pacific Railroad—The last rail needed to complete the greatest railroad enterprise of the world is about to be laid, the last spike needed to unite the Atlantic and Pacific by a new line of travel and commerce is about to be driven to its place. To perform these acts, the East and West have come together. Never since history commenced her record of human events has she been called upon to note the completion of a work so magnificent in conception, and so marvelous in execution. California, within whose borders, and by whose citizens the Pacific Railroad was inaugurated, desires to express her appreciation of the vast importance to her and her sister states of the great enterprise which is about to be consummated by your joint action. From her mines of gold she has forged a spike, from her laurel woods she has hewn a tie, and by the hands of her citizens she offers them to become a part of the great highway which is about to unite her in closer fellowship with her sisters of the Atlantic. From her bosom was taken the first soil ; let hers be the last tie, and the last spike. With them accept the hopes and wishes of her people that the success of your enterprise may not stop short of its brightest promise.

The speech of F. A. Tritle, in presenting the silver spike to Dr. Durant of the Union Pacific, was, like the rest, epigrammatic :

To the iron of the East, and the gold of the West, Nevada adds the link of silver to span the continent and weld the oceans.

The following was the speech of Governor Safford in presenting the spike of Arizona.

Ribbed in iron, clad in silver and crowned with gold, Arizona presents her offering to the enterprise that has banded the continent and welded the oceans.

Then Governor Stanford said :

Gentlemen : The Pacific Railroad Companies accept with pride and satisfaction these gold and silver tokens of your appreciation of the importance of our enterprise to the material interests of the sections which you represent on this occasion, and to the material interests of our whole country, east and west, north and south. These gifts shall receive a fitting place in the superstructure of the road ; and before laying the tie and driving the spikes in completion of the Pacific Railway, allow me to express the hope that the great importance which you are pleased to attach to our undertaking, may be in all respects fully realized. This line of rails connecting the Atlantic and Pacific, and affording to commerce a new transit, will prove, we trust, the speedy forerunner of increased facilities. The Pacific Railroad will, as soon as commerce shall begin fully to realize its advantages, demonstrate the necessity of rich improvements in railroading, so as to render practicable the transportation of freights at a much less rate than are possible under any system which has thus far anywhere been adopted. The day is not far distant when three roads will be found necessary to accommodate the commerce and travel which will seek a transit across this continent. In conclusion I will add that we hope to do what is not now possible on long lines: transport coarse, heavy, and cheap products for all distances at living rates to the trade. Now, gentlemen, with your assistance, we will proceed to lay the last tie, the last rail, and to drive the last spike.

General George W. Dodge, speaking in behalf of the Union Pacific, said :

*Gentlemen :—*The great Benton prophesied that some day a granite statue of Columbus would be erected on the highest peak of the Rocky mountains, pointing westward, denoting this as the great route across the continent. You have made the prophecy to-day a fact. This is the way to India.

The telephone not having been invented, these speeches were not heard by the groups gathered about the telegraph offices in all the great cities of the continent, who participated

more intimately, however, in the dramatic dialogue carried on by telegraph. At 2:27 P. M., this message went from Promontory Point :

Almost ready. Hats off; prayer is being offered.

After an interval of reverent silence, the bell tapped, and the offices at Promontory Point said :

We have done praying. The spike is about to be presented.

To which Chicago responded :

We understand. All are ready in the East.

A few moments later Promontory Point added :

All ready now. The spike will soon be driven. The signal will be three dots for the commencement of blows.

After another moment of silence the hammer tapped the bell of the Capitol three times. A briefer pause ensued, and the blows of the silver hammer, held by Governor Stanford, were repeated on the bell of the Capitol of Washington near the borders of one ocean; on the great fire-bell in the city sitting on the borders of another ocean; in the report of the cannon that woke the echoes of the Golden Gate; and, in telegraphic accents, in all the centers of population North, South, East and West. At 2:47 Promontory Point sententiously said

DONE!

and the telegraphic colloquy, in which the continent joined, was ended by these messages of official triumph, dated at Promontory Summit, the first to the general public, the sec-

ond to His Excellency, General U. S. Grant, President of the United States :

The last rail is laid ! The last spike driven. The Pacific Railroad is completed.

LELAND STANFORD,

Central Pacific Railroad.

T. P. DURANT,
SIDNEY DILLON, } *Union Pacific Railroad.*
JOHN DUFF,

SIR: We have the honor to report that the last rail is laid, the last spike is driven. The Pacific Railroad is finished.

LELAND STANFORD,

President C. P. R. R. Co. of California.

T. P. DURANT,

Vice-President U. P. R. R. Co.

After these ceremonies, which were interspersed with cheers for the national government, the rival railroad presidents, the "old flag," and the laborers, the locomotives of the two roads moved up head to head, libations of wine were poured upon the track, and to the fine fancy of Bret Harte, this is

WHAT THE ENGINES SAID.

What was it the engines said,
Pilots touching, head to head,
Facing on the single track,
Half a world behind each back ?
This is what the engines said
Unreported and unread.

With a prefatory screech
In a florid Western speech,
Said the engine from the WEST,
"I am from Sierra's crest;
And, if altitude's a test,
Why, I reckon, its confessed,
That I've done my level best."

Said the engine from the EAST,
 " They who work best talk the least,
 S'pose you whistle down your brakes ;
 What you've done is no great shakes,—
 Pretty fair,—but let our meeting
 Be a different kind of greeting.
 Let those folks with champagne stuffing,
 Not their engines, do the *puffing*."

" Listen ! where the Atlantic beats
 Shores of snow and summer heats ;
 Where the Indian-summer skies
 Paint the woods with wampum dies,—
 I have chased the flying sun
 Seeing all he looked upon,
 Blessing all that he has blest,
 Nursing in my iron breast
 All his vivifying heat,
 All his clouds about my crest ;
 And before my flying feet
 Every shadow must retreat."

Said the Western engine, " Phew ! "
 And a long low whistle blew.
 " Come, now, really that's oddest
 Talk for one so very modest.
 You brag of your East ! *You* do ?
 Why, *I* bring the East to *you* !
 All the Orient, all Cathay,
 Find through me the shortest way ;
 And the sun you follow here
 Rises in my hemisphere.
 Really,—if one must be rude,—
 Length, my friend, ain't longitude."

Said the Union, " Don't reflect, or
 I'll run over some Director."
 Said the Central, " I'm Pacific ;
 But, when riled, I'm quite terrific.
 Yet to-day we shall not quarrel,
 Just to show these folks this moral,
 How two engines—in their vision—
 Once have met without collision."

That is what the engines said,
 Unreported and unread;
 Spoken slightly through the nose,
 With a whistle at the close.

The last tie was made of California laurel. It was eight feet in length, eight inches wide, and six inches thick, highly polished, and bearing on a silver escutcheon, the legend "The last tie laid on the Pacific Railroad, May 10th, 1869." The names of the Directors and executive officers of the Central Pacific Railroad followed the inscription. It was taken up immediately after the ceremony, and another of pine substituted, which disappeared in a few moments, cut into minute fragments by eager curiosity-hunters. It was replaced by a second, which was divided and distributed by the Chinese laborers. The departing spectators saw the soldiers hammering at the rails, in the effort to obtain some trifling memento of this remarkable occasion. A banquet ended the exercises of the day, after which officials, their guests, and spectators separated, diverging toward their homes in the distant East and West.

Financial Exhibit of the Central Pacific.

Capital stock actually paid in	\$54,275,500
Funded debt.....	53,069,095
United States subsidy bonds	27,855,680
Land grants of 11,722,400 acres at \$2.50	29,306,000
Value of lands in San Francisco, Oakland, and Sacramento.	7,750,000
Total value.....	\$172,256,275

OF THIS AND OTHER FIGURE PIECES.

DESCRIPTIVE.

In painting his picture, Mr. Hill has selected the situation of deepest and most serious feeling, that at the moment when the officiating clergyman was just finishing his prayer, and the electricians were about connecting the golden spike with the trans-continental telegraph line. The view is eastward, along the track of the Union Pacific Railroad, toward the horizon, bounded by the snowy summit of the Wasatch mountains. The massive figure of Governor Stanford, leaning on his hammer, arrests the eye, which, after a moment's pause, passes beyond him to the locomotive, half hidden by figures, and then on into the plains, covered with sagebrush, and suffused with the warm light of an almost cloudless afternoon. There are about four hundred figures on the canvas, seventy of which are portraits. These are placed in positions pre-arranged, and not easily varied. It was essential that they should be grouped according to official prominence, and rules of subordination, based on their relative importance to the enterprise. [The subject forbade wide scope of incident. There are introduced, however,

some well-known characters of the Plains, and a few incidents indicating the contrast between the old life, and the incoming civilization. At the left is seen a stage-coach, old-fashioned, effete, its occupation gone, its slow courses shamed by the swift wheels of the flying locomotive. Beyond are a few wagons such as had at that time found their way into the desert, a wagon-train that had left the Missouri months before, and a race in progress with mustangs, in whose riders the gambling instinct was stronger than matters of national concern. Other incidents are a strap-game, poker-playing on a barrel-head, one or two saloons improvised for the occasion, a few Indians in their native dress, a few venders of cigars, a company of soldiers that chanced to be present, all of which features help to give variety of detail, to enrich and harmonize the colors, and to relieve the more formal groupings. Minor groups are arranged in pyramids, which fall into curves and semi-circles leading up to the cluster of important personages that surround the commanding central figure. Kneeling at the feet of Governor Stanford is F. L. Vandenburg, the chief electrician of the occasion, who is adjusting the wire which leads off through the crowd to the telegraph pole on the right. At his left is J. H. Strowbridge, general superintendent of the work of construction. The chief men of the Central Pacific railroad, C. P. Huntington, Mark Hopkins, E. B. Crocker, Charles Crocker, T. D. Judah, are all represented in characteristic attitudes. and with features accurately portrayed. Near Governor Stanford are the President and Directors of the Union Pacific, Oakes Ames, Sidney Dillon, Dr. Durant, and John Duff. Hon. A. A. Sargent, who played so important and honorable

a part in the legislation that made the building of the road possible, is shown by an admirable portrait at the right. Behind him is Hon. T. G. Phelps, his colleague in Congress while the Pacific Railroad legislation was taking shape, and its friend throughout. In the same part of the canvas are S. S. Montague, Chief Engineer of the Central Pacific; Colonel George E. Gray, Consulting Engineer; the two assistant engineers, L. M. Clement and Charles Cadwalader; Judge S. W. Sanderson, at present chief legal adviser of the road; B. B. Redding of the Land Department; A. K. P. Safford, then Governor of Arizona; and Hon. Milton S. Latham, United States Senator from California when the road was begun, and at all times its warm friend. Elsewhere can be found William Sherman, James W. Haynes and F. A. Tritle, United States Pacific Railroad Commissioners; John Corning, Division Superintendent, afterwards Assistant General Superintendent, and E. H. Miller, Jr., Secretary of the Central Pacific Railroad Company; Robert Robinson, Counsel for the Company; Arthur Brown, Superintendent of Bridges and Buildings; E. Black Ryan, Private Secretary of Governor Stanford; Charles Marsh, one of the original incorporators; Edgar Mills, Master of Ceremonies; Dr. H. W. Harkness, of Sacramento; Dr. J. D. B. Stillman, of San Francisco; A. P. Stanford, brother of Governor Stanford; J. R. Watson, Conductor of the first passenger train on the Central Pacific; Benjamin Welch, Master Builder of the Sacramento Car Works; Stephen T. Gage, of the Chief Executive Department of the Central Pacific; John Casement, Contractor of the Central Pacific, and David Hewes. The ladies are Mrs. Strowbridge, Mrs. Ryan, and the wives of officers command-

ing troops in the vicinity, who were all present, helping to give the scene an air of refinement, and adding to the canvas a picturesque quality. The Wasatch Mountains are five or six miles distant. They trend away to the north, diminishing in height till they become a low range of blue hills bounding the grayish-green expanse of plains. The foreground is filled with warm light, lending to the pile of ties, the keg of spikes, the grading implements, and even to the fresh earth, a mellow radiance that raises them above the commonplace, and invests them with a portion of the interest attaching to a scene, in which they had played no unimportant part.

LIMITATIONS OF THE FIGURE-PAINTER.

Writers on form and color agree that figure-painting is the highest department of art. The landscape painter may learn much of the figure-painter, but the latter has little to impart in return. Not that landscape-painting is not full of admirable and noble work, but as man is

The roof and crown of things,

as human character surpasses in complication the life of the flower and tree, so there is more required of that painter who depicts the face and form of man with its expression of feeling and intellect, and in its human relations, than of him whose chief duty it is to mass, contrast, and harmonize color. The good landscape-painter must draw well, but his lines need not be accurate. The essential of his work is "quality." Corot, whose reputation is pre-eminent among French artists, draws badly, scarcely more than suggesting his lines. Turner

was never a superior draughtsman. The figure-painter must be skilled in detail, but his *technique* must not appear in his finished work. He is the greatest in art, who best conceals his art. None the less must he be a master of color. Perception of character is more common than a fine feeling for external nature, therefore there are more good critics of figure-painting, or *genre* work, than of landscape. There are few even among the uneducated, who have not studied their fellows more than they have observed the blue of the sky, the form and fleecy quality of the clouds, the hues of autumn, the rose of sunset, or the purples of the distance. The public of the figure-painter being so large and so acute, if he is a pretender he is quickly discovered and exposed. The painter's difficulties increase as he multiplies his figures. He must place them in new attitudes, give them greater variety of expression and yet harmonize them all with his central motive. The treatment of even a single figure requires ease and accuracy of execution. To unite these qualities in a portrait is a severe test of skill, since there is a likeness known and endeared to many which has to be preserved with all its subtle expression, and yet there must be none of the rigidity of set feature or the stiffness of pre-arranged attitude. The more portraits, the greater the perplexity of the artist, of whom there is demanded more refinement of taste, and a profounder mastery of composition. Everything that hampers him in his effort to express his thought beyond the absolute requirements of art clogs his imagination, and puts him ill at ease. It is a further cause of embarrassment if he is obliged to group his figures within straight lines, and arrange them according to

an absolute plan in order to illustrate an historical incident. All the difficulties herein indicated Mr. Hill has had to meet, and overcome, and they are such as few artists have encountered. Figure-painters have usually been able to group and arrange according to their taste and judgment. They have had to deal with few likenesses. Horace Vernet's great battle-piece, "*La Smala*," represents the French army surprising a hostile camp. It contains, perhaps, twelve portraits. The "*Reign of Terror*," by Paul Delaroche, is made familiar to the general public by engravings. It portrays a prison scene just before one of those wholesale executions so common during the last days of the French revolution. It contains twenty-five portraits, and except for the exact care necessary to the introduction of these individual likenesses, allows the utmost freedom to the painter's imagination. The "*Ave Cæsar*," by Gerome, has been made even more familiar by reproduction. It shows a fight of gladiators in the Roman Colosseum. It is full of figures, but has no portraits. The scene is interesting, and the details at the will of the artist, who is helped to ease of expression by the flowing outlines of the amphitheater. Kaulbach's "*Battle of the Huns*," by being remote in time and out of the ordinary range of historical experience, has given the painter the widest latitude in the choice of detail and general arrangement. Of more modern works it only needs to mention Yvon's "*Taking of the Malakoff*," Leutze's "*Washington Crossing the Delaware*," and Powell's "*De Soto Discovering the Mississippi*." The first is an immense work including many portraits, principally of French generals. The other two are in the Capitol at Washington, and well known to

Americans. Each has a few portraits, the accuracy of which can never be tested by comparison with the originals, a circumstance tending to induce lenient criticism.

THE STUBBORN MATERIAL YIELDS.

All eminent figure painters have had a freedom in the treatment of their subjects not possible to Mr. Hill. They could group as they chose, select or reject individuals at their pleasure, and, as they dealt with figures in action, were allowed great liberty in placing them in picturesque attitudes. Besides the dramatic qualities of pose and position, many of them had whatever advantage might come from striking bits of architecture. Mr. Hill deals with four hundred figures in almost perfect rest. The landscape in which they stand, except for a lovely quality in the atmosphere, and a certain enchantment of distance, is without extraordinary features. The scene is wanting in the dramatic intensity that belongs to a battle. The figures have not the variety of pose of soldiers in action. The auxiliaries are those of simple commercial greatness and national repose. The scene represents a victory of that renowned kind which peace has as well as war, but which peace wins with the pen and ledger in the quiet counting-room, or in silent landscapes with the sword and spear transformed from their hostile uses. Every one of the pictures mentioned has the interest that attaches to intense human passion, even that of De Soto, who, exhausted by prolonged contests with disease, with barbarous tribes, with perils of the wilderness,

gazed at the Mississippi as Cortez "stared at the Pacific,"

Silent upon a peak in Darien.

The picture symbolizes the victory of will rather than the triumph of passion—a grander incident, but less available for purposes of art. That which should be its strength is an element of weakness. It represents the assiduous labor of nearly four years—four years of determined effort to make the absolute and commonplace yield to the principles of art; to create a picture out of material presumed to lack the artistic element, and all this persevering labor in the face of Cassandra-like prophecies of failure from all aware of the effort. The thankless material has yielded to the hand of the artist. The picture is complete. It perpetuates a rigid historical incident, and accurately preserves valuable portraits in rich, diversified, and harmonious colors, with flowing grace of outline, and freedom of individual treatment. The figures are drawn well, and placed in easy attitudes. The characteristics of the men are as well shown in pose and outline as in feature, making a rare combination of strong faces and manly forms. The predominance of the American type in the fine contour of the heads adds a national interest. The conception and expression of the painter are level to the event. Minor incidents are skillfully introduced. The plain, the mountains, and the sky show that the hand of the landscape-painter has not forgot its cunning.



The man whose portrait adorns this page is the chief lobbyist of C. P. Huntington, the well-known, self-confessed and boasting briber of National Legislatures. He may be

seen during the morning hours and the early portion of the afternoon of every week day at the Capitol, engaged in the business of persuading or trying to persuade Senators and Members of the House of Representatives at Washington, to vote for the Huntington Funding Bill, which at this time is pending in the House. He has been the principal lobbyist for Mr. Huntington for several years past, and he is very jubilant of late in his assurances that the measure that his master desires to have enacted into law at this Congress, or one of practically similar import, will be passed by both Houses by a large majority this winter.

It is commonly reported that three million dollars in gold and silver coin have been obtained by Mr. Huntington with which to "educate" and "persuade" persons to support his bill, but as there is not less than \$60,000,000 involved in the passage or defeat of the measure, it is highly probable that many times three millions has been conditionally devoted to this proselyting work.

To be seen in private conversation with this chief of Huntington's lobby at the National Capitol is to fairly subject oneself to the suspicion that he is, or is about to become, one of the aiders and abettors in some nefarious scheme of legislation devised by C. P. Huntington and his associates. All intelligent and respectable members of the Senate and House who are properly informed as to his business avoid him, and when any one of such members is cornered by the industrious and persistent lobbyist whose portrait adjoins this text, the innocent victim gives every sign of shame and distress. As to the character of those regularly seen in his company at the National Capitol in agreeable and whispering conversation, there is no manner of doubt.

Adolph Sutro, now Mayor of San Francisco—recently elected to that office by an overwhelming majority of votes—telegraphed the suggestion last summer: That this man,

should be debarred the privilege of lobbying in the Capitol of the Nation while Congress was in session. So notorious were the man's relations to C. P. Huntington.

It has been audaciously declared by some persons that the charges or intimations of corruption referred to come from no respectable or responsible source, and are in fact untrue. It will be an adequate response to this assertion if a very few statements and quotations are given here. If the bill advocated is evidently or demonstrably one that, in the editorial language of a recent number of the *New York World*, is plainly designed to "rob the Government," and if the person or persons to be benefited by it have been stigmatized by honorable commissioners of our Government as defrauders of the Government by reason of their actions as beneficiaries under the Pacific Railroad Acts, then it may naturally be expected that in order to secure the passage of such a bill corrupt means will be employed.

During his first administration President Cleveland appointed a commission, under Act of Congress approved March 3, 1887, to "make an investigation of the books and accounts and *methods* of railroads which have received aid from the United States," and one of the members of that commission was the Hon. Robert E. Pattison, late Governor of Pennsylvania, and at the time of this writing, though alleged to be a citizen of Harrisburg (so wondrous is the popularity which he has acquired by reason of his public services in the Executive Chair of the great State of Pennsylvania, and elsewhere), candidate for mayor of Philadelphia on the Democratic ticket.

In his report as a commissioner under the appointment above noted Mr. Pattison takes occasion to say (pp. 21 and 22 of his report, as separately printed) :

"The Central Pacific also expended \$4,818,355.67, of which the managers declined to give any explanation, or to

permit others to explain. As the resources of the company have been diminished to the extent of these expenditures, and as the road itself will not yield sufficient to satisfy the Government claim, it is apparent that the United States are eventually the losers by those disbursements, most of which, as shown by the Huntington letters, *were applied to corrupt public men and influence legislation.*"

On page 16 of the same report, same edition, attention is called to the fact that the testimony taken by the Congressional committee known as the Wilson committee showed :

"That an allowance was made to T. C. Durant of **\$435,750.21** for expenses in passing through Congress the amendatory Act of July 2, 1864."

From among the many confessions of his bribery—"methods" by C. P. Huntington, which appear in the Colton letters and elsewhere, there is perhaps none that is put with such delicacy and withal with such unmistakable precision as the confession found in a letter to Mr. David D. Colton, dated New York, December 23, 1875, from which the following extract is taken :

"The Doctor was unfortunate about the railroad committee; that is, there was not a man put in the committee that was on his list, and I must say I was deceived. He was often with Kerr, and K. was at his rooms and spent nearly one evening. The committee is not necessarily a Texas Pacific, but it is a commercial committee, and I have not much fear but that they can be convinced that ours is the right bill for the country. If they could have been left as we fixed them last winter there would have been little difficulty in defeating Scott's bill."

The Doctor referred to was an ex-United States Senator, and was hired as a lobbyist—as the Huntington letters show—with a special view to cajole and bamboozle the Senators and Members of Congress from the Southern States, if

possible, in the interest of Huntington and associates of the Southern Pacific Railroad Company.

Under date of January 17, 1876, Huntington writes to his friend Colton :

“FRIEND COLTON : I have received several letters and telegrams from Washington to-day, all calling me there, as Scott will certainly pass his Texas Pacific bill if I do not come over, and I shall go over to-night. * * * It costs money to fix things so that I would know his bill would not pass. I believe with \$200,000 I can pass our bill, but I take it that it is not worth that much to us.”

Now, Mr. Huntington's principal lobbyist in Washington has no personal interest in the legislation proposed, respecting which he manipulates, other than is connected with service direct to his employer. That as a lobbyist he is a faithful servant to such a master sufficiently implies the nature of his obligation and performances. He was recently seen passing a check in a furtive manner while standing on the floor of the House of Representatives, shortly before the House was called to order.

As to the iniquitous character of the Funding Bill, which provides for the extension of time in which the Union Pacific and Central Pacific Railroad Companies may pay their indebtedness to the Government for a period of fifty years at 3 per cent. per annum interest, it is sufficient to state, for the benefit of those entirely uninformed in the premises, that the subject was thoroughly considered by Commissioner Pattison, and that he reported (page 79 of his report as separately printed):

“At present prices of railroad construction it is evident that from the properties themselves the Government cannot recover within one hundred and eight millions of the present value of the indebtedness owing to it by the bond-aided

companies, and any extension of the time for payment would be useless and would expose to further risk and depreciation the present inadequate security for the debt."

On page 18 of the same report, we read :

"Nearly every obligation which these corporations assumed under the laws of the United States or as common carriers has been violated. Their management has been a National disgrace." * * * "It is no answer to the Government that the managers of these companies did only that which the managers of railroads in other sections did. These lines were built upon public credit. They were public highways in the broadest sense of that term. The managers were acting as trustees of a National highway, and they cannot plead any lawful justification for making false affidavits, which state that \$97,098,590 of stock was actually paid for, when in fact less than two millions had been so paid for!"

And the Commissioner goes on to say, at page 29 :

"The objections to an extension of the time of payment of the debt of the Union Pacific are many and INSUPERABLE, and were strongly urged upon the Commissioners when testimony was taken in Kansas, Nebraska and Colorado." * * * "*To fund the indebtedness of the company to the Government is to give it an additional subsidy.*" * * * "It would validate results of fraud and be a condonation of monstrous iniquities which the Government cannot afford. The gross mismanagement of the Union Pacific and the other Pacific railroads has not only injured the credit of American railroads among the investors in this country, but it has shaken the faith of foreign investors to such an extent that hundreds of millions of dollars which otherwise would have been sent here for investment and aided in the development of the country have been locked up abroad." * * * "The present capitalization and indebtedness of the Union Pacific Railway represents triple the cost of its reproduction. *To extend the debt* is to place a mortgage upon the earnings and upon the products of the people of Kansas, Nebraska and Colorado, not only of this but of succeeding generations."

* * * “*To extend the debt* is to perpetuate the extortionate rates of transportation which are now charged by the Union Pacific for the maintenance of its present inflated capitalization. Why should the communities of the great West be forced to pay rates that will perpetuate this enormous burden of fictitious and fraudulent indebtedness?”

And, on page 28, the Central Pacific is considered as follows:

“The traffic manager of the Central Pacific testified that his company could not pay the debt, *and that an extension for an indefinite time would not be sufficient to enable it to do so.* The fact is that as to all the companies except the Union Pacific their bankruptcy is so complete and irretrievable that no part of their indebtedness can ever be recovered by the Government except by immediate compulsory legal process. Extension of time for payment, therefore, means in reality but an increase of the amount of the debt and the making of its recovery more hopeless.”

Now, it is to obtain the passage of a bill providing for the extension of time for payment of the indebtedness of the Union Pacific and Central Pacific fifty years, as before stated, that the man, whose countenance and figure is here presented, and his associates, are busily engaged in interviewing members of both Houses of Congress, and bringing to bear all the appliances which they possess or control in order to secure a majority of votes in Congress for this Huntington plan for “condoning fraud,” and making the recovery of the indebtedness of the Pacific roads to the Government virtually hopeless.

A gentleman who was for a number of years in the employ of the Central Pacific Railroad Company, or of its president, Leland Stanford—one of the most intimate friends of the late Leland Stanford—and possessing an expert’s knowledge of the transactions of that railroad company, in a recent letter to the *New York World*, says:

“Huntington appears to have expended at least \$1,800,-

000 during his operations in Washington and elsewhere to break down the Texas Pacific Railroad."

The effort of the Huntington lobby is now, and for several weeks past has been, particularly directed to the Democratic side of the House, and more especially to the Democratic Representatives who come from the Southern States. The current report is that the Huntington measure will receive an almost unanimous support from the Republican side of the House, this report being gathered or fortified from the statements of the chief Huntington lobbyist and his associates. Let us hope and believe that this is a gross slander. It is reported that many Democrats from the North can be depended upon to support this measure, according to what already has been ascertained by the Huntington canvassers; referring particularly to those Democratic members who were recently defeated for re-election. This is probably another slander, as made in this wholesale form.

Many additions have been made to the Huntington lobby of late, and in nearly every instance the selections have been men from the South, including several ex-Congressmen from that section of the Union. Now, both before and since the War of the Rebellion, it has been generally conceded that honesty of intention and action as National Representatives—whatever challenge may be made on account of their strict partisanship—was a distinguished characteristic of nearly every Southern Senator and Congressman; that it has been characteristic of them as a class. And the people will be slow to believe that Senators and Representatives from the Southern States will, in any considerable number, set aside their conscientious convictions on this subject for any pecuniary consideration or any promise of railroad-monopoly aid in support or promotion of their political aspirations.

MECHANICAL EXPERT TESTIMONY

IN THE CASE OF

T. F. MAHER, VS. C. P. R. R. CO.

Cause tried before Judge Beldon, of San Jose, in Superior Court of Sacramento Co., July 17th to 21st, inclusive.

DAMAGES LAID AT \$25,500;

Verdict for Plaintiff, \$12,500 and Costs.

Has been Compromised by the Company paying \$10,000 and Costs.

SACRAMENTO:

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NOBLE FISHER,

Called for the Plaintiff. Sworn.

MR. BEATTY.—Mr. Fisher, where do you reside?

Answer. On K street, Sacramento.

Q. What is your business?

A. Machinist.

Q. How long have you been in that business?

A. Thirty years in June last.

Q. How old are you, Mr. Fisher, now?

A. In my forty-fifth year.

Q. Where did you learn your trade?

A. Partly in England and partly in Ireland. I finished
in England.

Q. Where have you worked at your trade?

A. I have worked in England, Ireland, Canada and the
United States.

Q. In what particular branch of Machinery?

A. Setting up engines and working in the round house.

Q. In what round house did you work?

A. I have worked in two in England, one in Canada, and two in the United States.

Q. What round houses were they; just name them?

A. The Oxford, Worcester and Wolverhampton in England; the Grand Trunk in Montreal; the Brockville and Ottawa; the Central Pacific round house at Sacramento, and the Pan Handle round house at Logansport, Ind.

Q. Are you familiar with the construction and parts of a locomotive?

A. Yes.

Q. Have you seen that sketch behind you there?

A. Yes, I have seen that.

Q. Is that a fair representation of the outlines of the frame and driving boxes, brasses, wedges, wheels and side bars of a locomotive?

A. It is a fair outline of a skeleton frame of an American engine or locomotive.

Q. How many locomotives have you set up, repaired and examined in the course of your experience?

A. Well, I have been a machinist for thirty years, but I could not say exactly how many. But I was working in that twenty years. I must have set up considerable.

Q. Have you ever been engaged in the factory of locomotives, right where they were manufactured?

A. Yes.

Q. How long?

A. Fifteen months.

Q. Where?

A. Worcester, England. The Worcester, England, locomotive works.

Q. What did you do there?

A. I worked on side rods and connecting rods. That is, those rods and the main rods.

Q. Any other works—did you work on any other part of an engine, in setting it up?

A. Every portion of it.

Q. How many years of your life?

A. For twenty.

Q. Do you consider yourself competent in that line of business?

A. Thoroughly.

Q. How are the wheels—the driving wheels of a locomotive fastened to the axle?

A. They are set on with hydraulic pressure in some engines and keyed on in others.

Q. Do they work on the axle?

A. They are wedged on the axle.

Q. In turning, the axle turns with the wheel?

A. They are part and parcel of each other.

Q. How is the diameter of one driving wheel as compared with the diameter of the other wheel?

A. They are alike as in this; they must be exactly the same.

Q. On both sides?

A. On both sides.

Q. All four wheels?

A. All four wheels; yes.

Q. What is the distance on one wheel as compared with the other?

A. They must be exact.

Q. The same?

A. Each one the same.

Q. What is the length of the driving brass and the pivot on which it keeps in proper train?

A. Exactly the difference between the exact points as when set up in the frame.

Q. Do you understand the tram of an engine?

A. Yes; the tram of an engine is the exact distance between the axle boxes which set in place, carried between that and the crank or crank-pin set parallel with each other.

Q. How are the two axles of a locomotive kept in proper position?

A. By axle boxes.

Q. Describe the axle boxes?

A. The axle boxes are cast iron in most engines, brass in others. The brass is generally in one piece, in other cases put in three pieces; the center piece, the crown or crown piece, being a wedge. In the majority of frames in the United States, axle boxes are held in their true positions by wedges, either at one side of the box, and the same length between centers is carried out until it is carried and trammed to the center of the pivot or pivots on the crank, which on an outside locomotive are part of the bosses of the wheels. The boss is the center part of the wheels where it sticks straight out to the rim.

Q. When a locomotive is set up, how tight are the driving boxes and the brasses and the wedges?

A. The brass in the axle boxes should be absolutely without motion. They should be set in just as though they were part and parcel of the boxes; the box itself when set up partly in the jaws of the frame, the horns or wedges on either side should be set up so that the box may move up and down with a short bar, as their own weight is not supposed to be sufficient to move them. The faces of the boxes are made perfectly smooth so as to touch the wedges all over, and the wedges in the same way touch the horns of the frame, so there can be no possibility of lost motion.

Q. What is the objection to the lost motion in an engine?

A. The lost motion in an engine causes considerable shock, which shock causes the faces of the bearings to come together and wear to a greater amount, or cause a greater amount of wear in a given time.

Q. Or rather the wear becomes very much extended?

A. Yes.

Q. Is accelerated?

A. Yes.

Q. Then if a locomotive engine was running with loose braces or loose boxes, it would continue to get loose at an accelerated rate would it?

A. Yes.

Q. Necessarily there is a large amount of wear upon the driving boxes, wedge and brasses in operating an engine?

A. All machinery will wear in motion.

Q. What is done in order to remedy that?

A. When the wear is especially on the boxes, the wedges are set up so as to compensate for the wear. When on the brasses, the brasses are taken out and new ones put in, or else the brasses are shinned up.

Q. What is done to tell that?

A. To tram the engine. Or the engineer can always locate the wear if he knows his business. That is one of the principle parts of his business.

Q. Can a machinist who has worked as you have worked on a locomotive tell when anything of that sort is out of order?

A. Undoubtedly, sir.

Q. Then I understand you to say that by inspection by any person competent they can tell whether anything is out of order or not?

A. Yes.

Q. When an engine is in constant use is it usual or necessary or proper to make that inspection?

A. Undoubtedly.

Q. How often?

A. Well, there is no given time. Of course on an engine that has been doing heavy work and on a bad road it should be done oftener than on a good road and light work. As the amount of work is greater in one case than in the other.

Q. Suppose that an engine was employed in drawing a passenger train a distance of one-hundred and seventy-five miles every day over a road comparatively rough and uneven for a period of sixteen months, would it be necessary to make an inspection during that time of that locomotive and overhaul her to see if anything had got out of order or not?

A. The engineer should make an inspection every time he takes her out or brings her back, and know of any wear that is going on that comes under his observation from his experience and knowledge in running as an engineer, and if that is neglected, the party over him should attend to it. It is his business, and if not, there is negligence.

Q. Suppose that an engine had been running for a length of time without any repair, if it needed repair, would it be the duty of a prudent inspector of engines or the person charged with that duty on that road to overhaul her?

A. In that case it would be recognized by people who had anything to do with her as a "scrap heap," which needed general repairs.

Q. Well how long ought an engine be allowed to run under those circumstances without an overhauling or an examination?

A. When she got in that condition.

Q. To determine whether she was in proper repair or not?

A. She should not be allowed to run at all. She should at least get an examination within a couple or three months—any engine, that is if there was no repair made in the meantime.

Q. Do you know what pound is, an expression used by engineers?

A. I do, sir.

Q. In the driving boxes?

A. Yes.

Q. What does it indicate?

A. It indicates an undue wear or lost motion.

Q. What does it indicate in reference to tightness or looseness?

A. It indicates looseness. It indicates a wear on the part of the box.

Q. Supposing that a pound has been observed in the left back driving box of one engine during the whole year, in what condition would that engine, without repairs, be at the end of the year, running over the road I have described?

A. It would be ready to go in the "scrap heap," or put in the shop for thorough repairs.

Q. Would it be prudent to allow an engine to run over such a road in such a manner, with that pound, for a whole year?

A. No, sir.

Q. For how long would it be prudent to allow it to run?

A. It would not be prudent to allow it to run in that condition.

Q. A careful and prudent inspector of locomotives would have it repaired at once?

A. Yes, if he attended to his business.

Q. Did you ever make any experiment or participate in the conducting of any experiment of the effect of wrought iron with a continual jar or vibration of the iron?

A. Well, in the last year of my apprenticeship, in the year 1859, there was an accident on the Oxford and Wolverhampton railroad—an excursion train coming up an incline broke into, the rear half ran back and ran into an other train that was following. At that time we made very extensive and exhaustive experiments as to what the iron would sustain. Now, the cars in England are differently coupled to what they are here. The train is screwed together there with screw-couplings, so that the buffers in each car touches the car immediately in front and rear, so the engine cannot move without moving the train, while here they move each individual car or truck by itself. It was a coupling that broke. It was made—the couplings were then made of the best “Lomoor” iron, and the test were on the iron that these were composed of; in every case the iron pulled out as though it was torn or fractured, showing the fibre of the iron drawn out from each other as though it was torn—a very uneven surface and of a grey color. I also was engaged in testing a hydraulic brake, patented by a frenchman by the name of “Gasse,” while working for the same company, and the iron in that case made the same kind of fracture.

Q. Did you ever see the effect called granulization or crystalization of wrought iron?

A. Many a time.

Q. What is that?

A. It is an alteration that takes place in the iron so as to completely break the fibre in the length, and when broken or fractured, has the appearance of a bunch of pyrites of iron, showing angular faces in a bunch which are of a bright surface.

THE COURT.—It becomes crystalized?

A. Yes.

MR. BEATTY.—The iron undergoes a change in its construction?

A. Yes.

Q. So instead of being fibres it becomes granulated?

A. Yes.

Q. How does that effect its liability to break?

A. It becomes very brittle and liable to break from shock.

Q. Now, suppose a bar of iron as the side bar described to be here 7 feet in length, 3 inches wide and 2 inches thick, composed of wrought iron, to break square across the middle, what would that give evidence of?

A. It would give evidence of a long continued pound in the boxes, which allowed an accelerated shock each time that the engine or wheels turned or revolved; each shock was conveyed to the side rods, and that shock granulized the fibre of the iron.

Q. And the fact that it broke in that way would indicate that it had undergone that change in the structure?

A. Undoubtedly.

Q. It was caused in that way?

A. There was no other way for that to come about.

Q. If three or four out of the boxes of the engine were tight, and the left back driving box was loose, and the locomotive was kept in motion upon a rough road with more or less curves, and running at a pretty high rate of speed, would any strain in that case be thrown upon the side bar upon that side upon which it is not intended to bear?

A. Undoubtedly the side bar would have to bear and hold the wheel to compensate for the lost motion in the box.

Q. Is it true or not in the construction of locomotives that the material is so distributed as to put the greater amount of material where the greater amount of strain is expected to fall?

A. Undoubtedly.

Q. And the less amount where the less amount is expected?

A. Yes.

Q. In the adaption of its parts then, no particular part is made heavier to bear the strain than it is expected to bear?

A. No; not in a well constructed locomotive.

Q. Then if an engine is run for a considerable length of time with a loose driving box on one side, would it be true that a strain would be thrown on the side bar that the side bar would not be adapted to resist?

A. Undoubtedly, sir.

Q. The effect of that would be to subject it to a continual repetition of shocks?

A. Yes.

Q. And granulate the iron?

A. Snap it later.

Q. It would break?

A. Yes.

Q. Suppose that looseness was of the thirty-second of an inch of the brasses, allowing that much play backward and forward on the rear axle on one side, would that be more or less than would be safe?

A. That would be more than would be safe. There is not supposed to be any looseness; if there was supposed to be looseness, it would be put there when the engine was constructed.

Q. Would or would not a prudent man remedy such a looseness as that?

A. Undoubtedly, sir.

Q. Would you consider it a want of proper care to allow a locomotive to remain in that condition?

A. I would consider it gross negligence.

Q. On any road?

A. On any road.

Q. How would it be if the road was unusually rough?

A. The negligence would be the more—it would be of the worst character.

Q. It is in testimony here, Mr. Fisher, that the driving rod of locomotive engine, No. 94, broke square across, somewhere near the center, while the locomotive was descending a grade, drawing a passenger train, without steam, and running at the rate of about twenty-five miles an hour; after the locomotive had been in use on the road for about sixteen

months, and about a year after a pound had been noticed in the driving box; to what cause would you attribute under those circumstances the breaking of that driving rod?

A. The lost motion in the box.

Q. Producing what?

A. Producing granulization of the iron of which the bar was constructed.

Q. That lost motion in the box would be due to the looseness of the brass, if it should be shown that the brasses were 1-32 of an inch loose?

A. Yes.

Q. Have you ever observed any flaws in driving bars in the course of your experiments?

A. I have observed it in all wrought iron.

Q. In what direction had those flaws extended?

A. In the line of the fibre.

Q. Across the bar, or along the length of the bar?

A. Along longitudinally.

Q. Those bars were made of wrought iron?

A. Yes.

Q. And the fibre extends the length of the bar?

A. Yes.

Q. Suppose a side bar without any flaw in it, neither longitudinally nor transversely, should break as this rod is described to have broken, would or would not that imply a want of care on the part of those who had charge or control of that engine?

A. Undoubtedly.

MR. DENSON.—It seems to me that this is going beyond the case.

The Court sustained the objection.

Cross Examination.

MR. DENSON.—Mr. Fisher, where did you learn your trade?

A. Sir!

Q. Where did you learn your trade as a machinist?

A. Partly in Ireland and partly in England—I served seven years.

Q. I understood you to say you had been a machinist for thirty years?

A. Yes; including my apprenticeship. That includes my apprenticeship of seven years.

Q. You began to learn your trade thirty years ago?

A. Thirty years ago.

Q. When did you work for the Central Pacific?

A. In 1869—the fall of '69.

Q. How long?

A. Something better than a month, I believe.

Q. In what capacity were you engaged?

A. A machinist.

Q. What particular work were you doing?

A. Repairing locomotive engines.

Q. At what point or place?

A. Sacramento.

Q. What particular department or building were you in then?

A. At that time their shops were not completed, and they had to do a portion of their work in the round house. I worked partly in the round house and partly in the shop.

Q. What position did you hold then?

A. A machinist.

Q. Merely as a journeyman?

A. As journeyman.

Q. Had you worked at any other railroad business in the United States?

A. Yes.

Q. Where?

A. The Union Pacific, the Memphis and Ohio, the Memphis and Tennessee, and the Chattanooga.

Q. All since 1869?

A. All since 1869.

Q. How long since you were engaged in railroad work?

A. It is very near ten years. The last work I done was in Virginia City, for the Virginia and Truckee road.

Q. Nearly ten years ago?

A. Yes.

Q. And since that time you have not been giving your attention to the railroad business?

A. Only through papers I have subscribed for. I have kept myself posted in that way.

Q. I mean you have not done any particular work?

A. Nor I have not forgotten any of it either.

Q. You have not been practically engaged since 1869?

A. Not on locomotive machinery.

Q. Since about ten years ago—since 1869?

A. Yes.

Q. When you were engaged in the construction and setting up of locomotives, were you employed as foreman or as journeyman?

A. As journeyman.

Q. You did your work then under the direction of a foreman?

A. Generally. Sometimes under contract.

Q. What business have you been engaged in lately—for the last few years?

A. As a machinist.

Q. You have a shop here in the city?

A. Yes.

Q. Are you building machinery or only repairing it?

A. Repairing or building, as occasion requires.

Q. Have you built many machines or engines latterly?

A. I have built one or two small engines. I make whatever came within the scope of my tools, and I do not pretend to run a large shop.

Q. Now, in speaking of the drivers of a locomotive, is it not a fact, Mr. Fisher, that the front drivers wear faster than the rear drivers?

A. Well, ordinarily they call the wheels that are coupled with rods "drivers;" I do not know them in that relation. The pair that take the power from the cylinder here are drivers; the others are only driven by them. Of course the main strain is on them, and they wear faster.

Q. They do wear a little faster?

A. I believe so.

Q. Then when they wear so as to be a little smaller, and the two being connected by the side rod, is it not necessary that there should be a little lost motion to counteract the lost motion of the wheels?

A. There usually is; but that is overcome by taking them out and turning them down to a uniform size.

Q. Still they are wearing, and it is increasing from day to day, and in the meantime there is a little lost motion?

A. Very trifling from that cause.

Q. Whatever of lost motion is made in one place may be gained in another?

A. Undoubtedly.

Q. That is a law of mechanics?

A. Yes.

Q. The machine would break otherwise, and would not run?

A. Yes.

Q. Now, have not you known engines to run for three or four years without any considerable repairs being made on them?

A. Never.

Q. You never did?

A. No, sir.

Q. How long do you consider a good, new and complete engine would run without overhauling?

A. I do think a good engine without an overhauling of some description would run three months. There is always something to be done to an engine that is in constant use.

Q. Supposing an engine is a good engine, being built at a first class factory, and built accurately and well, and from time to time reported to the shop to be repaired, as repairs would be necessary, that engine would last a long time would it not?

A. Undoubtedly. By the end of her life there will be

none of her original material, it being replaced from time to time by wear.

Q. What, in your judgment, is the life of a locomotive engine?

A. I believe they run ten or twelve years; something of that kind.

Q. Ten or twelve years?

A. Yes.

Q. Well, at the end of ten or twelve years, there would be a number of new parts at that time?

A. There would be very little of the old engine there.

Q. Of course she does not wear out all over at once?

A. No.

Q. Some parts will get worn—something will require repairs, and that is new?

A. Some parts will take the strain; or there is more strain on some parts than others. They wear first, and wear so much in advance of others that they have to be renewed before others are renewed.

Q. On some parts there is necessarily considerable wear?

A. Yes.

Q. And on other parts there is no perceptible wear at all?

A. Exactly, sir.

Q. What is your theory, Mr. Fisher, of the reason why engines that have a pound in starting or working heavily do not pound when under full headway?

A. Because the momentum is so great that it covers it up apparently—at the same time the wear is the same.

Q. Is the motion the same?

A. The motion, undoubtedly, must be the same, though it might not be perceptible to any person.

Q. The jar or pounding continues all the time?

A. I should consider the shock the same all the time.

Q. Do not you think the engine settles down on her bearings when in full motion, and her momentum in starting which produced the jar or pound, and the jar or pound is got rid of after that?

A. No, sir.

Q. You think the shock continues at every stroke of the piston?

A. Undoubtedly.

Q. You spoke of a lost motion in one of the boxes; suppose there was the same motion in both, or the same looseness in both, what effect would that have upon the connecting rod?

A. It would increase the pound—it would increase the shock to the brasses.

Q. But the two axles work on their bearings together?

A. Yes; it would increase the shock, because each time the wheel made an entire revolution, that 32d of an inch spoken of this morning, if that occurred in all boxes the engine would run forward the 32d of an inch, or back on the journal. When a forward stroke it is a big stroke, according to the position of the crank at the time.

Q. You think it would not be safe to run an engine that had 1-32 of an inch play at all, as I understand you?

A. It might be safe to run it, but I should not like to have to do it.

Q. Your experience has been in the shop and not in running engines?

A. I have not been running an engine, sir. My experience was simply in the shop making new work and overhauling old work, and seeing the results of running.

Q. I understand you to say, in relation to flaws in iron bars, that the flaws are always longitudinal?

A. Always in rolled iron. I never saw a piece of rolled iron that had flaws across its section.

Q. They always run the other way?

A. They always run with the fibres of the metal.

Q. How with steel bars?

A. Steel bars! Some do have flaws running across, but that is caused from the crack in the manufacturing, but are easily discernible from the outside when the metal is heated.

Q. Are you prepared to say now that the cause of the

breaking of a parallel rod is a jar or pound created by looseness in the boxes, or that it occurred from other causes?

A. I do not know of any other cause.

Q. No other cause?

A. No, sir.

Q. Do you recollect about the length of a side bar or connecting rod?

A. It was stated that these were seven feet.

Q. When that is revolving rapidly, is not there necessarily a very considerable force exerted in the middle portion of that bar by its own weight and rapid revolution?

A. Undoubtedly it adds to the shock, because the cranks have to lift that additional weight each time they turn the center.

Q. Would not there be a possibility or liability of that bar to crystalize in the center in this constant rapid motion, even if there was no jar longitudinally upon it at all?

A. If the box is tight there can be no jar. There would be a jar that you have reference to.

Q. Would not the jar upon the middle of the bar be precisely the same in that regard, whether the ends were tight or not?

A. If the ends were tight, the bar would be sufficiently tight to prevent a strain.

Q. The jar would be greater the heavier it is—the more jar there would be and the more weight?

A. Up to a certain point.

Q. Taking a bar that is constantly going in that motion up and down, is not the fact that the heavier that bar the greater the weight, the greater the strain upon it every time it goes up and down?

A. That is if the bar was so.

Q. Is not the jar greater as the bar is heavier?

A. The jar is greater, but it would not bend there—does not bend; it does not sag.

Q. Is not the tendency to make it sag, whether it is strong

enough to resist it, is another question—is not the tendency of that motion?

A. The tendency of that motion, of course—it has that tendency, but not the same extent that the shock from lost motion has.

Q. The tendency of that motion is to bend the bar in the middle all the time, whether it does do it is a question of strength of the iron and quality?

A. I expect so.

Q. But the very motion of the bar going up and down, the tendency would be to bend in the middle, and if it was light it would bend it—the weight of the bar, or the velocity would bend it?

A. I believe so.

Q. Now, is it not the fact of that motion, although the force would not be sufficient to bend it as it would be to crystalize that iron?

A. It would be to a certain extent.

Q. Now, Mr. Fisher, as a scientific man, you have investigated this subject, can any man tell by examining a bar of iron whether it has become polarized or crystalized—is there any way by which you can tell by any of your experiments?

A. No, sir; you must see the fracture.

Q. It does not show on the external surface, but when it breaks it breaks from crystalization?

A. Yes.

Q. But when it breaks, the usual form of the iron is changed and it makes little cubes?

A. Yes.

Q. And if you looked at that with a strong glass, you can see that the small particles of iron are in crystalized form instead of fibrous?

A. Yes.

Q. You don't know anything about this particular engine?

A. I do not know that I ever saw her.

Q. You did not examine, and know nothing about this particular rod?

A. No, sir.

Q. You are speaking simply from a general knowledge—
from a knowledge as an expert?

A. Yes.

Q. Now, those experiments you made, were done in Eng-
land.

A. Yes.

Q. Were those broken rods, or whatever they are called?

A. Couplings.

Q. Those fractures were made by tensiled strength?

A. Yes.

Q. Those were not made by polarization?

A. No, sir.

Q. The iron just pulled into?

A. Yes.

Q. So that has no relation to this kind of fracture at all?

A. No, sir. In the case of bad iron being broken, they
would say it would show crystalization. It would show a
fracture of that character.

Q. When a bar, say, two or three inches in size, is broken
from crystalization, could not a competent mechanic in exam-
ining that, tell whether it was crystalized or polarized, as they
call it?

A. Undoubtedly.

Q. Any man that understands his business could tell?

A. Yes.

Q. You could explain to one of us so we could see the
evidences by pointing it out?

A. I believe so.

Q. That is to a man of ordinary intelligence?

A. Yes.

Q. There would be to a man with good eyesight and
ordinary intelligence?

A. Yes.

Q. Did you ever have any opportunity of observing the
breaking of side rods, and the causes that lead to the breakage?

A. I believe I have. Nearly all the railroads I have

worked on have been subject to those kind of things.

Q. Well is it not a fact, that it is often very difficult to tell just what caused the breaking of a side rod?

A. I do not think so.

Q. Is not that one of the great puzzling problems of locomotive construction and engineers, and is not that considered one of the most difficult and annoying parts of a locomotive engine—the connecting rod between the two drivers?

A. They have puzzled themselves to find some other reason to find why they break, beside the lost motion. That is the only knowledge that I have.

Q. They have assumed that that came from lost motion?

A. They have not found anything else than lost motion. That is, as far as I have read and have any cognizance of.

Q. What works do you refer to?

A. I have Wriston and other works.

Q. Do you read the Railroad Gazetteer?

A. No, sir. I read the American Machinist, and I have no use for the Gazetteer.

Q. You are aware of the fact that there has been a great deal of speculation about the form of these rods, and a great deal of experimenting upon the shape of them?

A. Yes.

Q. Now, why is that, do you know?

A. The object is to distribute the weight of the rod so as to get the best working result. A rod that is made perfectly parallel it is generally expected is not the best shape for the rod. That the rod for the best working results should have a belly on it. That is, thicker in the center than the two ends.

Q. Would not that make it heavier in the middle and have a tendency to break?

A. Not necessarily. It certainly would make it heavier having the metal in the middle, but if that rod is built from a proper standpoint of weight, it would not be out of the way.

Q. The heavier you make it the heavier would be the blow; and heavier the strain on the middle every time it came down, would it not?

A. I suppose if you increase the weight of anything that you strike a blow with, you make the blow heavier.

Q. Two pounds lighter then, or two pounds heavier, as you increase or lighten it?

A. Yes.

Q. If you fall a tree across a log the natural tendency is to break the tree where the log is?

A. I suppose so.

Q. Supposing that we have two logs and a tree without a top; say that the end or each end of the tree fell on the two logs, where would the tree break?

A. I have no experience in falling timber so I cannot tell.

Q. As a mechanic, cannot you say?

A. I have had no experience of that kind.

Q. Would it not break in the middle, because the force of the fall is in the middle—because the fulcrums would be at each end. It would have a tendency to break in the middle, I mean?

A. The logs being built up and both ends some piece from the ground?

Q. Yes, of course, to give it force?

A. I believe it would.

Q. The strain would come in the middle?

A. I expect it would.

Q. Now, is not that principle open to this side rod every time it revolves; when it comes around, it comes down to the extent of this downward motion; it comes down with a velocity, which velocity is centered on the center of the rod, and is not the tendency necessarily to bend it—is not that the tendency to bend the rod.

A. I should not think it would. It is always in hand at both ends.

Q. If they were let go they would go to the earth very quick?

A. Undoubtedly.

Q. That is the ordinary motion it gets in moving upward and downward (showing), and when it comes to the lower po-

sition, it comes with a great velocity that would naturally fall there?

A. Yes, of its own volition.

Q. Then the natural tendency is to throw that weight, there is very little strain on the rod in that end, but the weight comes on the rod in the middle and not in the ends?

A. If it had that tendency it would bend in the middle.

Q. Could you tell what velocity that rod would make, supposing the engine to be making 300 revolutions a minute?

A. No, sir; I never had occasion to figure anything of that kind out.

Q. It is a well settled proposition that if the crank is a foot long then there is two feet between the upper and lower position of that bar, and if the crank is two foot long, then there is two feet between those places that the rod occupies when up and down?

A. Yes.

Q. Then in making 300 revolutions a minute, that would be 300 hundred times 2 which would be 600 a minute that it must travel—that would travel up and down?

A. Yes.

Q. A perpetual motion?

A. But it does not happen to be a perpendicular motion.

Q. It must make a perpendicular motion to get up?

A. It does; but it moves in an oval shape.

Q. Making a rotary motion?

A. It does not make a perpendicular motion.

Q. Swerve the drivers that much, and that would be the difference between the diameter and half circle?

A. Yes.

Q. The attraction of gravity is all the same?

A. Yes.

Q. You are not particularly friendly to this Defendant?

A. I never knew them before this case.

Q. I mean the Defendant, the Central Pacific Railroad Company?

A. I am acquainted with them. I have worked for them.

THE COURT.—That is not the question. He says you are not particularly friendly with the Central Pacific Railroad Company?

A. I do not know as I have any occasion to be unfriendly. They paid me when I worked for them, and I suppose they would not have paid me unless I did work; so I performed certain services for which they paid me, and our connection therefore ceased.

MR. DENSON.—You have had occasion to express yourself very bitterly against the Railroad Company?

A. As a monopoly I have, not as a Railroad Company.

Q. You have no particular friendly feelings toward them?

A. Not as a monopoly.

Q. You think it is not a good institution?

A. I do not think that as a monopoly, any institution is good. Railroad Company or other.

MR. BEATTY.—You say the work you done here was on the Virginia and Truckee Railroad?

A. Yes.

Q. What was your work?

A. Overhauling a Roger engine.

Q. What did you do to that engine?

A. I took out the axle brasses, shimmed them up, put back the brasses and fit up the frame, and took off the side rods and put them on again, and took out all lost motion around the engine.

Q. You have been asked a good deal about the up and down motion of this cross bar, now, Mr. Fisher, in respect to that down motion. When the side bar reaches its highest point and starts down at the very first—from the highest point it starts down very slowly compared with the motion it is making when it gets on the center?

A. It starts from the positive standstill. It comes to a positive standstill when coming to the highest point and also the lowest.

Q. It makes that a good deal faster when it gets to the center; and hence that driving movement when it goes downward? (Showing on diagram).

A. Yes.

Q. And when it gets to that point it scarcely moves at all?

A. Yes. (Showing).

Q. Now, at the point when this motion changes from a downward to an upward movement, there is scarcely any motion?

A. There is a positive rest.

Q. And, although that motion may take place instantaneously or in a very short time to the eyesight, there is, and it comes to a rest, although instantaneous in point of time?

A. Yes.

Q. And at the other side at that point of time, it is moving scarcely in any direction (showing), and then scarcely again in the other direction (showing)?

A. Yes.

Q. Now, as a mechanic, what would you say as to the effect of that gradual lessening and gradual increasing motion for taking up any shock in, would or would it not have any effect?

A. It would have the effect of reducing the shock—compensating for it. That is, the shock occasioned by its own weight. That is if the engine is in proper tram, and no lost motion in any of its bearings.

Q. How would a shock, occasioned by that up and downward motion, compare in tendency and effect with the shock occasioned by lost motion in the driving boxes?

A. Like the shock of a five cent piece toward a twenty dollar piece.

Q. As a five cent piece compared with a twenty dollar piece?

A. Yes.

Q. That would be as about four hundred to one?

A. I should think something in that neighborhood.

Q. I suppose you do not intend to express that four hundred to one?

A. Only as an article of speech, that is all.

Q. And if it be true that there is any necessary shock or jar to it, and the side bar is subjected to it, and this motion

up and down would tend in some degree to weaken that bar is it not also true that a superadded shock from any other source would accelerate the disintegration of that bar?

A. It would accelerate it and aggravate it. It would be an aggravated shock then.

Q. In other words, if there is any necessary cause for repairing this bar, a superadded would simply make matters worse?

A. Yes, in an increased ratio too.

Q. You do think that a competent mechanic, educated to that business, could tell by looking at the ends of a broken rod, whether the bar had undergone this granulization or crystalization?

A. They would know whether the bar was crystalized too, from the fact that it was used in that way.

Q. Judge Denson asked you if any body had seen a bar before it was broken, see the polerization—they could not?

A. I do not think they could. I have no knowledge of seeing any that way.

Q. But if a competent mechanic knew that a bar had been subjected to a certain shock for a long space of time, could he infer that it had been granulated?

A. Without any cause or manner of doubt. I do not think a man could have any doubt in his own mind about that.

Q. He could rely upon that inspection of the bar and see whether it was granulated or not?

A. Not the interior inspection.

Q. But if he knew what the bar had been put to, and what forces it had been subjected to, he could then infer whether it was granulated or not?

A. Well, he could infer from cause to effect. He would know the cause and the effect would be granulization.

Q. You say there has been a great deal of speculation among railroad men about the cause of side rods breaking, and they have given other theories than the lost motion in the driving box?

A. I believe so.

Q. But no other explanation has been given?

A. Not that I heard of—it never has been explained.

Q. Your opinion is, that that is the cause of the breaking of the rods?

A. My opinion is that can be the only cause.

Q. You were asked your opinion about the best shape of a side rod, and you say the best shape is a bellied rod, or increase toward the center?

A. Yes; slightly increased towards the center, so as to get the largest diameter of the rod where the heaviest shock is.

Q. That is to put the most material where the heaviest strain falls?

A. Yes.

Q. The fact that an engine has run for a very considerable time with a loose driving box, is no matter of inference that it is safe to continue to run that engine?

A. No, sir.

Q. What would you infer in reference to that?

A. I would infer that the material in the rod had become granulated from the constant shock.

Q. Would you infer that the longer it run in that condition the greater the danger in continuing to run it?

A. Undoubtedly.

Q. It would be the same if the brass was loose as the box alone, the same would occasion the pound if either was the cause?

A. Yes.

MR. DENSON.—Suppose that a bar should break, and upon examination should be discovered not to be polarized, then what would you suppose would be the cause of the breaking?

A. That it was too weak.

Q. Supposing a rod 2x3 inches in size, and 7 feet long, connecting an ordinary passenger locomotive carrying a light train, is that a sufficiently strong bar?

A. Yes; if a rod that size, I should consider the material of inferior character.

Q. The material was of inferior character?

A. Yes.

Q. Could that be discovered by inspection?

A. Of the break it could.

Q. Beforehand?

A. Not through any knowledge of the outside. A polished surface is a polished surface in all cases, unless there is a flaw that would show through the surface.

Q. Why is it that rods generally break while an engine is in rapid motion?

A. Because it is then subject to the heaviest shock.

Q. Have you ever known a parallel to break when there is no lost motion?

A. No; unless when they bend, the rods do not break, they twist off the pins.

Q. You never knew of any breaking, except on account of lost motion?

A. Never.

Q. How many side rods have you had occasion to inquire of?

A. Well, I must say I have not had occasion to inquire of any. The companies for which I worked may have had occasion during my time I worked for them; as to the number and extent of them I could not say.

Q. But are you prepared to say that they may not, when the engine is in heavy motion?

A. I believe that is the experience.

Q. Have you not heard of cases and know of cases where side rods break when the engine had almost stoped, or almost at a standstill?

A. It would be a surprise to me if I have.

Q. Then you have not?

A. Not to my knowledge.

J. W. CLARK

Called for the defendant. Sworn.

MR. DENSON. Where do you live?

ANSWER. Sacramento.

Q. What is your business?

A. Foreman of the roundhouse.

Q. Of the C. P. R. R. Company?

A. Of the Central Pacific.

Q. How long have you been in that position?

A. I have held the position of foreman nine years.

Q. In those shops?

A. In those shops.

Q. How long have you been.—What is your trade and profession?

A. I am a machinist.

Q. How long have you been a machinist?

A. I commenced my profession thirty years ago.

Q. And you have been at it ever since?

A. Most of the time.

Q. You consider yourself a competent machinist?

A. I do; I do most all the work.

Q. Have you ever worked on any other road besides the Central Pacific?

A. I worked on the Illinois Central and also during the war on the Nashville and Chattanooga.

Q. What is your particular duty as foreman of the roundhouse—what particular part of duty do you perform?

A. I have a general supervision of the roundhouse and also the erecting portion of the machine shops, what we call the pits.

Q. What have you to do with any repairs—what particular department of repairs have you charge of?

A. Of the general repairing.

Q. Repairing of engines?

A. Yes.

Q. Do you know engine No. 94?

A. I do.

Q. Do you recollect the circumstance of an accident occurring to her last August?

A. Yes.

Q. When was the last time you recollect having seen her, or noticed her particularly, before the accident?

A. I could not recollect when it was.

Q. You do not recollect the precise time when you examined her?

A. No, Sir.

Q. How do you ascertain or know when repairs are to be made there—what is the custom?

A. The engineer makes a report of work necessary to be done on the engine as he brings her in there?

Q. Then what do you do?

A. Then we examine what he reports, and if necessary to be done, we do it.

Q. You remember any repairs having been made on this engine, No. 94, just before this accident?

A. I do.

Q. What was that?

A. Shimming up the left back wedge.

Q. Did you notice her, at that time, or see that work be done?

A. I saw the work being done but I did not notice her particularly.

Q. You did not give any special personal attention to it?

A. No, sir.

Q. Did you notice the condition of the engine at that time?

A. The condition of her, in what way?

Q. In any way—in a general way?

A. No; I cannot say that I did.

Q. When she came in did you notice her condition?

A. I did.

Q. Did you observe the side rod that was broken?

A. I did.

Q. Did you examine it?

A. I did.

Q. In what condition was that?

A. Well, it was a square break, but I could not tell much

about it; the ends had been in the water or rusted and you could not tell much about it—could not discover any flaw in it.

Q. What was the condition as to being straight or crooked?

A. The pieces were straight, I think, by the way they lay on the floor.

Q. You did not notice any bend in them?

A. No, sir.

Q. What was done with the engine, that time she was brought back?

A. She was jacked up and given a kind of an ordinary overhauling.

Q. Now, is it the custom there, and you understand it, and tell us, if you can, why it was that amount of repairs that were made on this engine at this particular time?

A. Well, it is generally the habit when we take an engine in the shop, and after we take the wheels from under them, to go through the running gear, that is, the driving boxes and wedges, and such work as that, while we have them out.

Q. How are you guided about the amount—as to the amount of repairs and changes you make on them?

A. How are you?

Q. How are you guided as to the amount of repairs and overhauling you make?

A. Well, the repairing of the machinery.

Q. Did you happen to fix what happens to be broken, and fix that, or did you do other things?

A. We do other things if we think it is necessary.

Q. Do you or do you not review any parts that are really not worn out, at such times?

A. Some times we do, that are not really worn out.

Q. Why did you do that?

A. It is less expense to put in new than repair the old, such a thing as a wedge; it is cheaper to put in a new wedge sometimes than it is to repair the old one.

Q. Now, as to the matter of trusses; do you take out

trusses that are only partially worn, such work as that, when you are giving her an overhauling, or do you only take out such things as are worn out?

A. We most generally put in new brasses when we are repairing the axle.

Q. How about the matter of turning drivers and new wedges, and that sort of thing?

A. We always turn the drivers when we take them out after running any length of time.

Q. Do you do that only when the driver is actually in a condition that it would have to be turned then, or because you have them out and it is convenient to do it?

A. We do it because we have them out a great many times.

MR. DEVLIN. These are leading questions.

THE COURT. The question is answered.

MR. DENSON. Mr. Clark, what I want to get at is this: Were or were not all the repairs made on this engine, No. 94, at this time—the repairs—that in each instance would have been necessary, if the engine had not been brought into the shop for these other repairs?

A. No, sir; if that engine had not broke her side-rod she probably would have been running yet.

Q. You mean by that, she would not need any running repairs, or by ordinary running repairs she would have been running yet?

A. I think so; yes.

Q. By examination, and proper running repairs, as you call them, from time to time, how long would an engine run, say, making a regular trip such as this engine was making this run, where this engine was up one day and down the next?

A. They ought to be run from three to five years, according to the work they are doing.

A. Then, I will ask another question so as to avoid a leading form. How long ought an engine running on the road, and doing the amount of work this engine was doing, how often ought an engine be taken into the shop for general repairs and overhauling?

A. Well, you cannot tell about that.

Q. Do you think that sixteen months would be an extraordinary length of time for an engine to run without repairs?

A. No, sir. They ought to be run at least three years.

Q. How long would it take, Mr. Clark, for an engine doing the work this engine was doing, to become a "scrap heap?" I suppose you mechanics understand what that means—I don't.

A. That would be according to the man that is running it a good deal.

Q. What causes the thump or pound that is heard a good deal in an engine?

A. Well, it is lost motion.

Q. The lost motion—perhaps some of the jurors do not understand that—just explain that?

A. Well, what do you mean—in the driving box?

Q. Yes, or anywhere that causes the thump or pound in an engine.

A. The natural wear, what these engineers call thump, or a kick, or anything of that kind, they generally mean the driving boxes, or wedges.

THE COURT.—Let me ask him a question about lost motion. If I understand, lost motion is communicated by steam to the driving wheel, or first by the piston rod, and the rods may wear so there is a kick or lost motion. You mean a space more or less minute, that when power is communicated to other parts of the machinery there is a space more or less minute within which the bar passes through without motion (showing on the diagram)?

A. That is it.

MR. DENSON.—I think that can be put in a more humble phrase; as I understand this, Mr. Clark, lost motion (showing), there is the journal running on the barrel. Now, it is where the hole is a little larger than the journal or point that works in it?

A. That is it.

Q. Supposing that is the crank, and that is the point that

works in the socket, and when that hole is a little larger than that point, when that comes around to that position it does not move up or down in coming over to this side, it pushes it very near to the center, while here it pushes it neither up or down, and it comes to that by making a long stroke, or only the difference between the hole and that point?

THE COURT.—I understand that one part of the machinery moves without moving the other?

MR. DENSON.—This rod must move back an inch before it commences moving that crank?

A. When on a dead center.

Q. When it comes to a center then it goes back to the other side (showing), and that is what I understand by play or lost motion?

A. Yes (showing with model and diagram).

Q. Lost motion, as I understand, is, one part moves and don't move the other part of the machinery by the wear or space, as they do not fully work together. I would like to have you explain the actions and functions of the side-rods on an engine. Do it by means of that diagram, or that model, or any way you please, but explain to the jury what offices the side-rods have to perform, and what they are for, and all those things that it is expected to do?

A. I don't know whether I can do so satisfactorily or not.

Q. Do it your own way and the best you can, and commence at the piston rod?

A. The power is communicated from the piston to this main rod, and from that to the wheels. It takes steam in the front end here (showing), that rod is driven back, and when it gets up here (showing), this lets go, of course this rod is doing nothing and the other is pulling. There is a rough track to work on here and you cannot tell much about it. One side-rod does all the work at the time; when this side-rod is at the center, this rod does all the work (showing).

Q. Do you know what labor this rod is calculated to do?

when they are figuring on the size and strength of the rod what do they calculate in order to get the strength this rod must have?

A. I do not know exactly what they do calculate on.

Q. You are not familiar with that?

A. No, sir.

Q. I will suppose a lost motion in the driving box, either by means of the box being loose in the frame, or the brass loose in the box, or the bearings loose on the brass—that there is a little space in some of those places—is a rod seven feet long, two or three inches in size, of wrought iron of sufficient size and strength to hold these drivers in position?

A. Supposed to be. The rods are strong enough as a general thing, to take the pins off.

Q. Explain to the jury what the pins are?

A. These are called the pins here (showing). They are generally made of steel, and pressed in by hydraulic pressure.

Q. Into what?

A. Into the wheel.

Q. Into the spoke?

A. No, sir. The hub. There is a place on the driver to take these pins.

Q. The pin goes in the cast iron?

A. Yes, drove in by hydraulic pressure.

Q. And what is fastened onto the pin?

A. A side rod goes onto that pin.

Q. What is that for—what is the side-rod put onto that pin for—what does it do in regard to motion?

A. It couples the wheels together.

Q. What does it cause the wheels to do?

A. It connects the power to the back pair of wheels.

Q. And causes them to revolve?

A. And causes them to revolve.

Q. What do I understand you to say as to the comparative strength of these pins and the side rods?

A. The side rods as a general thing are strong enough to take the pins off.

Q. Break the pins before it will break the side-rods?

A. Yes.

Q. Have you had occasion to observe other side-rods and to know of their strength, and have you studied that question somewhat?

A. I have. We have had many to put on over there, and a great many breakages of that kind.

Q. Can you tell as a general proposition the cause of the breaking of a side rod?

A. I could not.

Q. Is it, or is it not a subject which machinists have discussed a good deal, and have they ever concluded upon that?

A. I guess they never have found out what it was yet.

Cross Examination.

MR. BEATTY.—Is it a part of your duty, Mr. Clark, to inspect the locomotive engines, there to see if they are in order, or to see when they need general repairs?

A. No, without an engine gives out, or sent in there for repairs.

Q. You depend upon the engineer in charge of a locomotive to report when they need repairs?

A. Yes.

Q. And they report what they need; general repairs as well as ordinary repairs?

A. They generally report. We know about when they are worn out.

Q. You know by reason of current repairs that you make on an engine when she gets a general overhauling?

A. Yes.

Q. You don't make any systematic inspection of locomotives?

A. Only when brought in the shop.

Q. The duty of reporting repairs is left to the locomotive engineer?

A. The general repairs.

Q. Well, the ordinary repairs. All you know is by their

apparent condition when brought in for general repairs?

A. We know that from time to time, by the work we do on it.

Q. You know that an engine running for a certain length of time—you know it is necessary to overhaul her?

A. Yes.

Q. How long do you let an engine run without overhauling her?

A. On the Oregon Road?

Q. On that road generally?

A. Different; from three to five years; sometimes six.

Q. Did you let them run six years generally without overhauling them?

A. Yes, on light roads or runs.

Q. Why is it that you let them run on, is it because you have examined them for repairs and repaired them?

A. Yes.

Q. Then you do examine them for temporary repairs and not for a general overhauling?

A. Yes.

Q. And if they need a general overhauling, you do it?

A. Yes.

Q. Do you know anything about these brasses—the looseness of a brass can not be discovered without taking the frame off the trucks?

A. These engineers claim they can tell about that.

Q. You do not know anything about that yourself?

A. No, sir.

Q. You have testified that you do not know that what is testified here as pound is lost motion?

A. Yes.

Q. And that lost motion you have defined a space, which in this instance the wheel must move, but the crank does not, is owing to the looseness of the brass, is not that correct?

A. I do not undrstand it—I do not understand your meaning.

Q. I thought I understood your meaning of lost motion—

Lost motion, as I understand it, is when that brass or box is loose so as to give the axle certain play in the box backward and forward one thirty-second of an inch, then when that axle is one side of the box as far as it will go, and side-bar turning on the crank pins commences pulling in another direction, it pulls the end in another direction before it turns the wheel?

A. Yes.

Q. And that is the lost motion?

A. Yes.

Q. And you say that causes all this pounding that engineers hear?

A. Either in the journal or the wedges.

Q. Do you think it is safe and proper to run a locomotive engine for a long time when that pound in one of the boxes is apparent to the engineers?

A. If that pound is not too bad.

Q. You do not expect to have that pounding in an engine that is in good condition?

A. You have a pound in all engines.

Q. At first, when first turned out?

A. There are a very few engines but what have a kicking when turned out, and there are a few that you cannot get the pound out of.

Q. But you would have a pound taken out or fixed?

A. You might.

Q. Is it, or is it not in setting up an engine, usual to set these brasses so tight that there is no lost motion or pound?

A. It would be a pretty hard matter to take up all the lost motion in an engine.

Q. I admit that it is pretty hard to take it up so that there is no lost motion, but when it comes to an appreciable lost motion, then that engine is not in good condition?

A. She is not in as good condition as when turned out, probably.

Q. And when that gets that way, and the longer you run that engine, the worse it gets?

A. It is apt to.

Q. And it is like the pounding of a hammer on these parts, the more it is done the more they wear, and the stronger the blow becomes, does it not?

A. Yes.

Q. The tendency of a derangement of that kind is to increase, at an accelerated rate, is it not?

A. It may be.

Q. Now, there is no doubt but that by the ordinary wear and tear all these engines will become loose a little—it is in testimony, that in this engine all the boxes were loose, but in the left back box it was worse than in the others; if that was the case, it was the cause of more than ordinary wear, was it not?

A. I could not tell about that.

Q. If the others were subjected to the same influences exactly as this was, and this had a great deal more pound than the others, there must have been more wear in that box and on those brasses, than in the others?

A. There might possibly have been a difference in the composition of the brasses in the boxes.

Q. There may be a difference in the composition in the brasses that made one wear more than the others?

A. Yes.

Q. If there is composition in the brasses that makes that one wear more than the others, it ought to be changed?

A. That ought to be what?

Q. Changed, and replaced with some that would not wear so fast?

A. Not necessarily.

Q. It is desirable that the brasses in one—it should not wear faster in one box than in the other three boxes?

A. There is hardly two journals wear alike in any machine.

Q. There is hardly any great difference between the one and the other three?

A. Certainly, we do not consider a great difference in those brasses.

Q. Is there any other cause you know of that would make

one brass wear faster than another brass in a locomotive?

A. No, sir.

Q. Especially the brasses in the rear box?

A. No, sir.

Q. Is there really a difference between the brasses of the front and rear boxes, ordinarily?

A. I am sure, I cannot tell.

Q. Is there any difference in the amount of the strain on these boxes?

A. I do not know.

Q. You say you saw no flaw in the pieces of that side-rod?

A. No, sir.

Q. Did you examine it?

A. I did.

Q. If there had been any flaw you would have seen it, I suppose?

A. I do not know whether I could have seen it or not; the rod had been dirty or wet—discolored—and I could not suppose you could tell whether there was any flaw in it or not.

Q. A flaw, as I understood it, is a break, and a polished piece of iron like that it would have been perceptible?

A. It would be apt to have been found.

Q. Anybody going over the engine would have seen it, in the case of a flaw of that kind, in polished iron, so that it was perceptible; you mean you could see it with your eye?

A. Yes, something like a scratch.

Q. Now, when an accident occurs to a locomotive, and she is brought into the shop and you have to take her off the wheels, you say you take that occasion to give her thorough repairs, but if she is on her wheels, you would not thought it necessary to give her at that time?

A. Yes.

Q. You tighten up all the boxes and brasses?

A. Generally.

Q. If they are loose you do?

A. Yes.

Q. You would not do that unless you thought you could

put her in better condition than with loose brasses?

A. Certainly, not.

Q. Then you do consider it neccessary that brasses should be tight?

A. We would not be apt to turn out a new engine with loose brasses.

Q. When it is just as convenient if you get a locomotive off the road, or off her trucks, you do think it is proper to tighten her brasses then—but you would not let them go loose, or would not probably tighten them, otherwise?

A. No, sir.

Q. If they are loose you would allow them to go, rather than take the engine off the road—what is the object of turning the wheels of a locomotive—the driving wheels—don't the crown wear into the tie in running over rails?

A. Yes.

Q. And it destroys that level which it ought to have, in order to compensate for the inequality in going around curves?

A. Yes.

Q. Therefore, it is desirable to turn it?

A. Yes.

Q. You did turn these locomotive tires whenever this locomotive was repaired?

A. Yes; we did turn them.

Q. That was a part of the repair?

A. Yes.

Q. Do you remember the number of hours put in in the reparation of that locomotive?

A. I do not know.

Q. Four hundred and eighty-five hours, at nine hours a day, would be one hundred and sixty-five days' work that was employed in repairing that work. How much of that one hundred and sixty-five days was necessary to repair the seat and the cab where it was broken?

A. I could not tell exactly.

Q. About how long? You can give an idea?

A. I have not much of an idea how long it would take in

repairing this cab; and the side-rod necessitates considerable work, sometimes.

Q. Do you think it took up any considerable portion of this one hundred and sixty-five days' work of repair done on this locomotive?

A. No, sir.

Q. But a small part of that work that was done?

A. Yes, sir.

Q. Do you know how long this engine has been running on this road?

A. She was put on the eleventh of April, 1881; I think a year.

Q. Where had she been before?

A. On the Western Division, I think.

Q. Do you know how long?

A. I do not. She has not run on here all the time.

Q. At the time of the accident, then, she had been running some sixteen months on this road?

A. I think so. I have not looked at the books particularly.

Q. You spoke something about the functions of a side-rod. Is not the principal object in having double driving wheels a convenience?

A. Yes.

Q. A locomotive will run just exactly as well with a single pair as a double pair, except with less traction, and there would be less danger in running with a single pair of wheels than a double pair, if you could get the same traction?

A. I think there would.

Q. The principal function of parallel rods is to distribute that traction between the wheels, so as to make the drivers do a portion of the work in making a curve in the track?

A. Yes.

Q. They also have to do some work in keeping the two sides of the wheels moving in unison, but are not intended to bear the strain of keeping those axles in tram, are they?

A. No, sir.

Q. The supposition is that a proper adjustment of the driving boxes and brasses will keep the axles in tram?

A. Yes, very near.

Q. That is what they are intended to do?

A. Yes.

Q. If they get loose, and there is any tendency of the locomotive, in passing around curves, for the two drivers to work too close together, and the driving boxes don't keep them at their proper distances, then this side-bar must do it, don't they?

A. I do not see how they could work close together with the side-bar there.

Q. In passing around a curve the inner pair of driving wheels travel over a shorter track than the outer pair?

A. Yes.

Q. The front axle is held rigidly in its place by tight boxes, and on the right side the rear axle is held in its place by a tight box. Now, the circumference of the drivers being the same on each side, is not there a tendency of the inner driver, on the side where the box is loose, to gain on the front driving wheels on that side?

A. I suppose there is a certain amount of slippage on the wheels.

Q. There is about the whole length of the two rails?

A. Yes.

Q. If by reason of the looseness of the brasses this axle is permitted to move forward, must not this side-bar keep pushing it back?

A. Yes; holding it back.

Q. Because the difference between the axle is the same as the difference between the crank pins, or it could not revolve. If that is otherwise, there is a strain on the side-bar that it is not intended to bear?

A. Certainly, it is. It is intended to bear that strain.

Q. It is intended to bear that strain?

A. There is not much strain on the bar when on the center. The other bar is doing all the work. There could not be much strain in keeping them back.

Q. The strain is on the other on that side at the same revolution of the wheels?

A. Yes.

Q. You did explain to the jury that at one stage of the revolution that the work was on one side, and at another portion on the other?

A. Yes.

Q. But when they come to this other point (showing) the inner one must keep the axles at the same distance, and that must be done at the same revolution?

A. These side-rods and brasses are generally put up loose. There is much lost motion in the two parallel rods. The side-rod brasses are never put in snug like the main rods.

Q. You leave a certain amount of play there, on purpose?

A. We do, always.

Q. You do not leave more than a sufficiency to move in the driving box?

A. Certainly.

Q. But when it comes to be an enlarged looseness or amount of play, so you can hear the thump or pound, you do not leave enough?

A. They don't generally get very loose.

Q. You don't leave enough play in your crank pins?

A. They don't generally get very loose.

Q. You don't leave them loose enough so as to be one thirty-second of an inch play?

A. Yes; we do.

Q. Is one thirty-second of an inch the usual amount of looseness in a driving box?

A. Not altogether. A sixty-fourth of an inch is not much looseness in a side-rod box.

Q. A sixty-fourth is a usual amount to leave there?

A. Nearly that, and sometimes more.

Q. What I say is, you don't leave a greater amount of looseness in the side-rod bearings than will correspond in the side-rod boxes?

A. We do not take up all lost motion.

Q. You don't make them any looser than necessary to correspond with the ordinary looseness in the side boxes?

A. Certainly.

Q. More loose than necessary?

A. Looser than the driving boxes are. The driving box is supposed to fit on the journal.

Q. They are looser, but the brasses in the driving boxes are driven in with hydraulic pressure?

A. Driven in.

Q. Driven in as tightly as they can be driven in?

A. As tightly as they will stand.

Q. And the side-rod bearings are left a little looser than that?

A. Certainly.

Q. But do you leave them a thirty-second of an inch loose?

A. Perhaps it is not as much as that—sixty-fourth on the end of each brass.

Q. And you think they have no strain to bear when the axle is closer together?

A. No, sir.

Q. You say you have had experience in the breaks of driving rods?

A. Of what?

Q. You have seen a great many breakages of driving rods?

A. Yes.

Q. At the shops?

A. Yes.

Q. How many, altogether?

A. I could not tell exactly without looking at the books.

Q. Approximate as near as you can.

A. Probably a dozen or fifteen in the last three or four years.

Q. How many locomotives are running on that road?

A. Out of Sacramento?

Q. Yes, that is it—that are coming to your shop for repairs?

A. Something over sixty, I believe.

Q. Do not more than that come there for repairs?

A. They come from different divisions here.

Q. You think there has been as many as a dozen rods broken on sixty locomotives. It is not a very common occurrence, then?

A. Not very.

Q. And you say that nobody has been able to tell the cause?

A. Never, that I know of.

Q. You said, in answer to Judge Denson, that engineers have debated that question, and puzzled over it a good deal. Do you mean that you have read scientific treatise on that subject by engineers who have discussed that subject?

A. No, sir.

Q. You have not read any?

A. No, sir.

Q. And you yourself cannot give a reason for it?

A. I cannot.

Q. Have you ever heard of granulization by vibration or concussion?

A. Yes.

Q. What causes it?

A. Sudden jar.

Q. Any sudden jar long continued will make fibrous and tough iron to become afterwards brittle, so as to break like steel?

A. Yes.

Q. Don't you think that is an adequate cause for the breaking of these rods?

A. It probably might be. I do not know.

Q. If that is the probable cause, and you cannot account for it in any other way, is not that the cause?

A. I could not say.

Q. They are not broken without some reason?

A. No, sir.

Q. A tough piece of iron will not break off ordinarily?

A. Not ordinarily.

Q. If you have an ordinary bar of iron, and that iron should break off square, do you think the metal must have changed?

A. Probably it is.

MR. DENSON.—Is it possible, always, to see a flaw in polished iron?

A. Not always. I do not think it is.

Q. Have you ever discovered flaws in axles after they have been turned?

A. After they have been used a long time, we have.

Q. Did you ever discover them after putting them into use—after turning or rolling out?

A. I don't recollect of any.

Q. I will ask you if you ever have known by reason of putting in the sun after rolling out—by rolling them out and setting them in the sun—discovered them? I have not talked with him about this, so I don't know.

A. I do not recollect.

MR. BEATTY.—Did you put in new driving axles when you repaired this engine?

A. We did.

Q. Why did you do that?

A. Because it showed signs of starting in the driver.

Q. What do you mean by that?

A. The axle showed signs of having started in the driver. The drivers are pressed on to the axle with hydraulic pressure, and we thought we had better change it.

Q. It was getting loose, so that the wheel did not fit as tightly on the axle?

A. Yes.

Q. What did you attribute that to?

A. I do not know whether it was the jar, or what it was.

Q. What usually causes that?

A. Different causes.

Q. Name some?

A. These McKay engines, they usually get loose on the

ax, and show a paint break. They are not pressed in sufficiently tight.

Q. This was a McKay, was it?

A. Yes.

Q. Could that be seen from the outside?

A. Yes.

Q. By a paint break?

A. Yes.

MR. DENSON.—You discovered this slight looseness or starting, as you call it, on the driver, after this engine came in from the accident?

A. Yes.

Q. Now, we will suppose the crank or side-bars had come down on the rail, maybe half a dozen times, or fifty times, would not that account to you for the looseness?

A. Probably it would.

Q. That jar of the engine coming down on that box rapidly by this lever, by reason of the engine moving, what effect would that have upon the brasses in the driving boxes, as held up by the wedge?

A. It might possibly break the boxes.

Q. Might it do anything else? Might it not loosen the brasses?

A. I do not know whether it would or not.

WILLIAM McKENZIE,

Called for the Defendant. Sworn.

MR. DENSON.—Where do you live?

A. Sacramento.

Q. What is your business?

A. I am Assistant Master Mechanic, at the present time, of the C. P. Railroad shops.

Q. Have you any trade or profession?

A. I am a machinist and a mechanical engineer.

Q. Where did you learn your trade?

A. I learned my trade opposite Black Rock; in Canada, at a place called Ottawa.

Q. I will ask you how long ago?

A. Well, I commenced there in 1850.

Q. You have been working at the machinist business how long?

A. About thirty-two years.

Q. How long have you been in your present position?

A. Since December last.

Q. Where were you before that?

A. For four years I was on similar repairs at the Bay.

Q. Before that?

A. Before that I was Master Mechanic on the Salt Lake Division.

Q. Before that?

A. I was engineer on the Oregon Division; and before that I was Superintendent of the Round House and machine shops for a long time.

Q. Have you had any experience in running engines?

A. I have run engines, about seven years, altogether.

Q. What kind of engines?

A. Passenger engine, freight engine, switch engine, gravel engine, and pay-car engine, once in a while.

Q. Do you know what care and diligence was taken by the Central Pacific Railroad Company in the selection of its employes—mechanics, engineers, and others?

A. So far as my judgment goes, they try to get the best they can.

MR. BEATTY.—We do not make any point on that.

THE COURT.—Do you admit that they do use diligence?

MR. BEATTY.—I guess we will let them prove what they want to on that.

MR. DENSON.—There seems to be some question, and I will proceed. Are you acquainted with Joseph Clark, the foreman of the Round House?

A. Yes; I have known him for ten years.

Q. Do you know his capacity as a machinist?

A. He is considered very good—a very good machinist.

He was in the round house with me at the time I was foreman there.

Q. What is your opinion as to his competency or incompetency to take charge of such work as the company have in the round house at Sacramento?

A. I consider him very competent.

Q. Are you acquainted with Mr. Wallace?

A. I am not so well acquainted with Mr. Wallace as with Mr. Clark; but I will say I am acquainted with Mr. Wallace, and, so far as I know, I consider Mr. Wallace well qualified for the position he has charge of.

Q. Are you acquainted with Barney Kelley?

A. I have known Mr. Kelley for about ten years.

Q. Know him in what capacity?

A. As a locomotive engineer.

Q. What is his capacity as a locomotive engineer? How does he rank?

A. He ranks first-class as a locomotive runner.

Q. Do you know how he is as to caution, or care, or otherwise?

A. He has been very fortunate, and I should judge from that he is very careful.

Q. Mr. McKenzie, I will ask you to take that model (handing model of locomotive to witness), and, if you please, and in your own way, explain to the jury the office, action, and function of a parallel rod, beginning, if you please, with the starting of the steam in the cylinder, in order that the jurors may all have a proper idea of the machinery; and when you get to the places, explain the train and the running boxes, or the driving boxes, and the jaws, in order to show the wedges, etc.?

A. Well, gentlemen, you see this machine here. When we want to get steam for that position (showing) the piston is now at the forward end of the cylinder; that is the cylinder (showing.) The steam is admitted at the forward end of the piston. When the engine is running that would be moving that way (showing) until it gets there, and that is what we call the end of the stroke, or the back stroke. Now, the steam

is admitted at this end, but at that particular moment, you see, this part of the engine is at that place. The cylinder has steam on, and consequently passes on its dead center; here it carries that, and carries it forward. If you notice, this one goes around at full power to there, and this one was on the dead center again. This bar or rod, called parallel rod, they turn the back wheels until they take them off. These boxes are kept in place by wedges in front and back, and as the engine runs along, it loosens that brass in the box; that causes the shimming up of the wedges. This jaw or wedge is taken up from time to time. (The witness here explained the way the wedge set in the box, and how tightened, and how the pieces were put on.) Of course, the relative position will all remain the same, and the engine revolve around, and these rods and these centers, and be exactly in the same position as they go around (showing.) This cylinder is just the same as that I have just explained. In backing up, the steam is admitted here, and causes this to back the engine up. You see that has no power at all, when on the right line, but this one, you see, has that power. This part of the engine is wrought iron (showing), and a wrought iron frame. Running down there is a wrought iron jaw with wrought iron boundaries; these wrought iron boundaries fit right to the bottom of the frame or jaw, and when this gets loose there is a pound in there (showing), and when that kicking that the witnesses have described—and also spoke about setting up wedges—when that thump occurs, it indicates that he ought to set the wedges up; and this is where he sets the wedge up. If he wants to set his wedge up, he takes a hold of this, and runs the wedge up. And when the wedges get worn down, a liner is put on there, and is put back again, and we tighten the wedges up, and he don't have anything else until a certain amount is worn off again. Then the wedge is set up from time to time, until it gets to the top of the jaw; and we have about two inches on the top to ride up and down to this jaw to ride in—that is, to let it oscillate up and down. The engine is allowed to wear a little in the jaw. Do you understand?

A JUROR.—I understand some portion of it.

MR. DENSON.—I will get you to explain a little more fully. Explain the wedge a little more fully.

A. Here is the wedge, you see (showing.) Now, as the wedge is turned off, and that is the shape of it there below. I will not turn it more than one-sixth of an inch in turning up a wedge; if it was properly attended to, it would go not more than half of the drop, by their own weight. If you draw them up they will drop of their own weight in the jaws, and one of the worst troubles we have in locomotive running is, our wedges get stuck up. When they get too tight they would lay an engineer out on his run, and he could not make his time, because he could not ride on the engine. This little bolt passes through each binder; there is a little hole through there; there is another on this side, and the box is parallel all the way through. That is fastened there.

Q. Explain the brasses in the driving boxes?

A. The brasses are put in, in nearly all cases, in three pieces. There is a certain piece comes around from the box, sitting on a cast iron shoulder, all the time, of the frame (showing.) These brasses in here is a piece that fits between those two after the brasses are fit in; the face sides are planed up with a planer. If the brasses should happen to wear and get loose in there, and the aim is to put those in as tight as cast will bear, and they are held by on this box called driving boxes.

Q. Why are brasses put in them?

A. The brasses are put in because they will stand more wear and tear than cast iron. The cast iron would not stand that.

Q. Explain where they go, and why they go there. I suppose they do not all understand it—I do not know.

A. All these men, I think, understand why brass is put in an engine or moving machine. We all know that wrought iron and cast iron used for a time, or brasses, rather, when worn a little, they will become that shape that will necessitate turning them out or throwing the box away, if made of cast

iron; but we can take a punch and punch the brass out, and line in behind it.

A JUROR.—That would be less expense?

A. Yes; the box we can keep longer without renewing, because we renew the brasses. In the old locomotive engine we put in the same liner, without shoeing the box. Originally, we did not put the shoe in there; you don't see no wedge on them. This modern arrangement is to take up the slack in this wedge.

Q. Now, will you explain to the jury this lost motion?

A. I do not agree with the other witnesses about the lost motion in the driving box. I think that is a motion found, We get lost motion in the valve. That is lost motion. You see (showing) when the piston gets in there, you all see directly, in the first start, we get more motion. We have, really, made more motion. If this box is bigger, the piston will drive both ways farther.

Q. What I want you to explain is what they call a thump or pound.

A. The pounding may be caused by the wedge being low; it may be caused by the wedge being loose, and it would take a better expert than I to tell which from which. I would have to go hunting around to tell which from which. If this was loose on the bottom (showing) when this piston is started here, and the steam is admitted here, you could tell it by a sudden jar; that jar takes place at both points at the back center, there, and the front center, here, and the back center and the front center on this side, and it will pound or jar on the center; and if this box is a little loose, or the wedge a little low, you can feel a small jar. Any engine—new machinery right out of the shops—have a sixty-fourth play there, and presently increasing as the engine wears, that perceptible jar increases with it, and after running that a considerable length of time, the engine is taken up off her wheels and overhauled; but hardly any of those engines run from two and one half to four years. Some come in in two and

one half years; some come in to have the boilers fixed, because of the bad water, and generally with bad fire boxes. If we take her in, for any reason, to get the boiler work done, then we go to work and fix anything that wants to be done for it; whereas, if the boiler had not given out, they would have run them a year or two with this little jar in there—although it is perceptible by engineers to be dangerous to the engine—not doing it any harm. It is hard to get a heavy revolving engine to run quietly—to run thirty-five miles an hour without getting a little pound. We have not done that yet.

Q. Mr. McKenzie, I understand you to say that it is impossible to get all these different joints and have them all so they are tight?

A. I never run a new engine without. I have not known any new engine without. When you take an engine out and hitch it onto a load, there is no engine made yet without a perceptible thump or pound; still it might at first originate where she takes steam through. On the back end of this rod (showing) it is expected to leave a thirty-second of an inch loose. In quartering, you will notice that this is at right angles. Now, you know, if that point is not exactly square with this point when you revolve it a half turn, it is just exactly as much as this side. The difficulty with quartering there is to get one driver so (showing), or else the pins' centers are pulled out. And it is so difficult to get that tram that it is a general proposition to leave the back axle of the back rod a little loose or slack. Then all these rods may be left sufficiently loose to run long distances; if kept tight, a sudden shock, so as to give a perceptible jar, would cause them to break, but the jar is not much—if tight, they would not run very far. The side bars, we used to make them heavy in the center. Nearly all mechanics, builders or makers, all find now that it is better to make the rod light in the middle. You look at that, and that will move up and down, and that rod moves up and down one hundred and forty or one hun-

dred and sixty times as we turn it around; you see it has moved up and down, and this engine went one hundred and twenty times, or over—probably one hundred and forty. You see that rod moves up and down, and is held or fastened at both ends, and it has that motion. That is the point farthest away; this is the middle; that is where they all break.

A JUROR.—I should think they ought to be stronger.

A. That is the first impression. We see now that all rods are made big in the middle. Now we take those out and we make the top thick and the middle thick, and not more than a half inch there (showing.) You take a very heavy bar of iron and place it between two points, of course it will bend down. The rod is continually in motion, all the time up and down, and the weight of the rod (?) gives it more of the tendency to go down; but after investigating these things for thirty or forty years, they concluded to make them lighter, among all the best builders, for running side-rods.

Q. Suppose there is a looseness of a thirty-second of an inch in one of the driving boxes, how would you regard that, as affecting the safety of the engine?

A. It is usual for engines running that become slack in the wedges, and not slack in the brasses on the journal, that would not wear a thirty-second of an inch after being out of the shop three or four months.

Q. You think the thirty-second of an inch play in one of the driving boxes—I will ask you, are you competent to testify regarding the running of machines, journals, etc.?

A. I don't see how you will get the thirty-second lost motion in the back box without it being in the front. At that point, where the steam is admitted, and that is the only concussion you will feel. You can't make this one place, and then jump back. I do not see how that could be done, unless there is lost motion in the other box. I cannot see how you can make this wheel jump back and forward with this side-rod on here. How can you drive this wheel back and forward without jerking that one? I don't think any man can see

that. Also, in another position, we have both points there again. Now you can move that back wheel forward without moving this one too.

MR. BEATTY.—I rather think this is an unusual way of giving testimony to the jury. I have not objected to the witness standing up and giving his opinion, and asking them questions, and arguing to the jury. I do not think the counsel ought to be forced to object to a proceeding of that kind.

MR. DENSON.—Mr. McKenzie, suppose there is a slight looseness in one of the left boxes, either from brass being loose, or brass being worn around the journal, so as to allow a play of the thirty-second of an inch, what effect do you think that would have upon the parallel rods?

A. The only effect, really, that the brasses have on the parallel rods, is when it passes between these points there (showing.) The rod is so long, and it must pass between those two; otherwise I do not see that they have any effect on the side-rod. That is a thirty-second of an inch of loose brass.

Q. Take an engine that has run a while with that amount of play—that is, necessary between the rods and the driving pins—would, in your judgment, the play of a thirty-second of an inch have any effect on the parallel rods?

A. Very little.

Q. Would it, in your judgment, break it?

A. I do not think it would. It would have no chance to break the rod. It is only where it is too tight that the rod breaks. If anything can be found, or any cause given for the rod breaking, it is the quartering of the wheel. But we have quartering machines that do their work very perfectly.

Q. Suppose that the wheels are not accurately quartered, and if the rod should break, will it break early?

A. Yes; early in the service; break quickly, early in the service. The longer the engine runs the less likelihood of breaking.

Q. What is the lifetime of an ordinary locomotive engine?

A.. The life of an engine depends entirely where the engine is.

Q. Of course, there are a great many things to take into consideration?

A. Down in New Hampshire, I have known twenty-three or twenty-four years to be the lifetime of an engine. In the country where we have bad water to contend with the life of an engine is very much shortened. They come down to ten or twelve years, where the repairs will cost to the amount of a new engine.

Q. Suppose an engine ten years old, what is her condition, or what has been done to it?

A. When an engine is ten years old, she might need new side-bars; she might need, if she were using bad water, a new boiler, but ordinarily some run fifteen years and we have some that have been longer in the service. She might want new cylinders; she might want new axles and crank-pins, and probably before that they have been put in. The crank-pins, the axles, and brasses and new rods are repaired and put in. When we come to the general frame, we may put in new side cylinders and new boilers. We use the frame, and keep on until the engine would be worn out.

Q. What I want to get at is, what the life of an engine is ordinarily—in ten years.

A. An engine would cost, after ten years, from seven to eight thousand dollars; probably it would not go over five thousand dollars, if she had a very good frame and good driving boxes. We ordinarily take engines and repair them that have their driving boxes broken; and I have known them to run their locomotives with these boxes broken—split right into; it cannot get out of there.

Q. How long will a parallel rod wear?

A. I have seen engines that have rods on them over twenty years old. We have others not so old. It is not usual to replace parallel rods after they break—they are put back in the service again in another way.

Q. Where was engine No. 94 made?

A. She was built by McKay & Alderson, Boston, I believe.

Q. What was the reputation in which that factory was held?

A. We have copied after the McKay & Alderson in a good many instances. We use McKay & Alderson, and we use McKay & Alderson cylinders.

Q. How does those works stand generally?

A. Good engines, and unusually smart engines. What we call a smart engine is an engine that works well. They are so held among other builders or constructors as first-class engines.

Q. Do you know this engine No. 94?

A. I have not seen her for a good many years.

Q. Did you handle her yourself?

A. I never run the engine; not that I recollect of.

Q. Are you sufficiently acquainted with her to tell whether she was in good condition or not?

A. I do not know anything about it; I don't know anything about it.

Q. Have you ever heard, or have you ever known of side bars breaking when there was no defect in the boxes or brasses?

A. I have. I have known of instances of side bar dropping off on the last turn of the wheel, when the engine was going in the shop. It was a clear break. Of course, it was what we call short iron—very little fiber in it.

Cross Examination.

MR. BEATTY.—You say you have heard or known of instances of side bars breaking when there was no defect in the machinery?

A. Not able to find any.

Q. Do you mean that you have known of these cases personally?

A. Yes.

Q. You do not suppose those rods broke without some cause?

A. I never found any for it. Of course, everthing has a cause; we understand that well enough.

Q. An iron rod is not going to break without something to break it, is it?

A. Well, I never found any cause for it.

Q. But there must have been a cause if you never discovered it?

A. I cannot argue that point with you.

Q. I did not ask you to argue it. I asked you a question.

A. And I answered it.

Q. I asked you if there must not have been a cause?

A. I suppose there is—everything has a cause—but we are unable to find the cause.

Q. I understand you to say that you never found the cause?

A. That is what I said.

Q. But what I asked you was, must there not have been a cause?

A. I certainly think there must have been a cause.

Q. If it was a defect in the machine itself, or in the iron?

A. It might have been a defect in the shape of a thing.

Q. It was either a defect in the machinery, or a defect in the machine?

A. I presume it was, or it would not have broken.

Q. Now, you say rods do run for twenty years without breaking?

A. Yes.

Q. And you take rods off old engines and put them on other ones?

A. I did not say that I took them.

Q. That is, when you rebuild engines, you take the same old rods and put them on the new engine?

A. We do quite frequently. It is always the same old engine. It was always the same old engine.

Q. It is made new in some respects?

A. The worn-out portion is renewed.

Q. The life of an engine is ten or twelve years, you say?

A. So far as I know, at the end of that time her repairs would cost about as much as a new engine.

Q. During that time you are required to make what you call ordinary repairs?

A. Yes.

Q. That would be going on all the same?

A. All the time.

Q. Amongst her repairs would not you include new brasses?

A. Yes.

Q. When you say the life of an ordinary engine is ten or twelve years, what do you mean?

A. What I mean is, that the ordinary and extraordinary repairs would amount to as much money as would the cost of a new engine; to put the ordinary and extraordinary repairs, the whole thing at the end of ten or twelve years would cost as much as a new one. That is plain enough, is it not?

Q. That is, certainly. Does it ever happen that the brasses in one driving box wear faster than brasses in another driving box?

A. It quite frequently happens.

Q. In such a case does that brass which gets to wearing faster continue to wear faster at an accelerated rate?

A. I think not. I think it would wear about the same, unless it would pound.

Q. If there was any pounding in that box, owing to the looseness of a brass, would it not increase in an accelerated rate?

A. I think it would, if the brasses were loose in the housings.

Q. Can a locomotive engineer tell in what boxes the brass is loose?

A. If much loose. If there was any perceptible loose-

ness in any of the brasses, he would be able to detect it, but if there is a perceptible jar in the engine that we have in all new engines, then it is almost uniform all through.

Q. Now, I understand from your testimony, Mr. McKenzie, that there is necessarily a certain amount of looseness in all these locomotives when new and first turned out?

A. I understand so.

Q. And you cannot help that?

A. You cannot help that.

Q. But does not that disappear?

A. After they are run we make them tighter.

Q. But you cannot put an engine into operation which does not wear upon these brasses; and after they run a while you set them up?

A. Yes.

Q. But in the ordinary wear of an engine, or in the ordinary work of an engine, and her driving boxes will get loose, and that one is set up. Have you ever known it to happen where one brass got looser than the other?

A. Yes; I run for two years, or a year and a half, with one loose, myself.

Q. How do you know?

A. Because it thumped a little—the front driving box was loose.

Q. Then if it was true that the engineer who ran this engine for a year heard that pound, and two engineers who took her out a month, and only one heard a thump in that box, do you think that was loose?

A. Yes; why should I think otherwise?

Q. And that there was a greater amount of looseness than was desirable in the locomotive?

A. I never run on a locomotive that had been out of the shop two or three months, but what would have that play.

Q. In all the boxes?

A. In all the boxes. Some more than others, probably. Understand me, when an engine is working full power, if you have a train to over-resistance to the engine, under those con-

ditions the engine will pound, right out of the shop, brand new.

Q. Will that happen in drawing a light passenger train with four cars?

A. In starting, where there is considerable strain on the engine—he might want to get away—he will start quick, then the engine will jar.

Q. Suppose you start gradually?

A. The thump would be in proportion to the power applied.

Q. Suppose there was a thump in one of the boxes, and no thump to amount to anything in the others, does it not indicate that there is where the thump is, or that that box is loose?

A. I do not think it is possible that that back driving box could thump without the others.

Q. You think all these other witnesses are mistaken?

A. I am not testifying for them. I am testifying for myself.

Q. You think they are mistaken, and that fact could not exist?

A. I do not think the back driving box can pound without being slack in the front one. As the power is applied to the first or front box, how could it act quicker on the other, or through the second one than the first one?

Q. I am asking you a question.

A. You want me to swear to what somebody else swore to, don't you?

Q. No; not at all. Did you ever hear of the granulization or crystalization of iron?

A. Yes; I have read of that in the papers.

Q. It is an admitted fact that iron will become brittle?

A. Yes; that in the course of years they say that iron changes its nature; that the simple strain from day to day, a bridge loses its strength, and by and by the bridge falls down.

Q. The bridge loses its strength both by torsional and tencil forces?

A. Yes.

Q. That being a well recognized fact, ought not any jar or shock constantly repeated, to be avoided with respect to those pieces of iron like side-rods?

A. We avoid it as far as we can.

Q. As far as you can you avoid it; and that is because you ought to avoid it?

A. We try to avoid it as far as we can, because we ought to avoid it.

Q. Because a recognized jar with long continued shocks to that side-bar might weaken it?

A. The engine wears out just the same as a steam hammer.

Q. Any recognized jar on those side-bars—any constant shocks—would tend to weaken it?

A. I should say so. If you put a side-rod in for a steam-hammer piston, it would not last very long.

Q. It is a well recognized fact that constant shocks will weaken iron in strength?

A. A continual strain or a continual hammering will change the nature of iron; and we know from experience as engineers, that it is impossible to get around this little thump or pound in driving boxes.

Q. That is impossible to get around sometimes?

A. To get around.

Q. But it is possible to avoid it to some extent?

A. Yes. Of course, when you take an engine in the shop and you can make her cost as much money as you want. The rich man, in buying a watch, can put up for a good one that keeps time, but the poor man keeps one that he keeps fixing all the time. We cannot make locomotives cost more than they earn.

Q. You think a prudent railroad man would not allow that to take place upon the side-bar for a long time, would he—that is, if it was loose in the box?

A. Not if it was serious, and he knew it.

Q. How long would it take, or how much work does it require to put in a new driving box in your shop?

A. We take the engine and jack her up, and put a gang of men on her, and put a set of driving boxes in her in forty-eight hours, if forced to it.

Q. Then that was the loss of the use of that engine for forty-eight hours, or one trip?

A. Yes; one round trip. I could not do that amount of work and carry on the other business; that would be an unusual occurrence.

Q. That would be an unusual occurrence?

A. To go through an engine that way; to get men enough to go through and strip her, take her wheels off, take her boxes out, and put her back again in shape; we would have about as many men around her as could stand.

Q. It would take about forty-eight hours?

A. It could be done in that time.

Q. And you would lose the use of the locomotive for one trip. Could it not be done in less time than that?

A. Well, I give myself time enough. I would not want to be left.

Q. You have stated you could do it in that time.

A. I think so. If we did not make a miscue in getting the boxes out of the frame.

Q. Were you short of locomotives about a year ago?

A. I do not know anything about it. I was steamboating then.

Q. I understand you to say you could take an engine, and put your attention to it, and take out the boxes—the driving boxes—and put them back again, in about forty-eight hours?

A. Yes.

Q. Would you be likely to go to that trouble if you knew it was loose?

A. I would not go to that trouble if I did know it was loose.

Q. Why?

A. Because I do not think it was necessary to have a box fixed with a wedge the thirty-second of an inch loose. I do not think it is detrimental to the engine.

A. J. STEVENS,

Called for the Plaintiff. Sworn.

MR. BEATTY.—You are the Master Mechanic of the Central Pacific Railroad Company?

A. Yes.

Q. It is your duty to make out rules with regard to certain subordinate employes of the Company, is it not?

A. Yes.

Q. You have made such rules?

A. I have.

Q. You are acquainted with the practice of that company and what is the practice generally with respect to the fireman. After they have served a certain length of time do you promote them—after they show themselves sufficiently competent?

A. We generally promote them after sufficient experience as a fireman, and if they are competent.

Q. If a man has served a sufficient length of time and you conclude that he is capable of running an engine, you give him an engine?

A. We generally put them on with some old engineers. I do not put them on the road at once.

Q. When put on as engineer their wages are increased?

A. Yes.

Q. What are their wages?

A. They vary.

Q. From what?

A. From three to five and six and seven dollars.

Q. Do you pay them by the day or month?

A. Pay them by the trip and the distance they run.

Q. What do the wages of a locomotive engineer amount to by the month?

MR. DENSON.—I object to it as immaterial and irrelevant.

MR. BEATTY.—Mr. Maher testifies that he is thirty-two years of age. He was thirty-one years of age when this accident had occurred, and had served several years as fireman

We propose to show that the custom is among railroad men to promote firemen to be engineers, and that Mr. Maher had well grounded expectation of receiving an increase of his wages—amounting to eighty or eighty-two dollars as fireman. I think he had served a sufficient length of time that within a few years he might reasonably expect to be an engineer—as an element of damages—coupled with the evidence that we have produced before the Court that he has been disqualified to do any work the balance of his lifetime—he must relinquish such claims.

MR. DENSON.—Mr. Stevens, what is your business?

A. I have charge of the machine shops of the Central Pacific Railroad Company.

Q. What is your official title there?

A. General Master Mechanic.

Q. What is your trade and profession?

A. Machinist and engineer.

Q. Where did you learn your trade?

A. Concord, New Hampshire.

Q. How long ago?

A. I guess in June, 1850—the first day of June.

Q. What have you been following since then?

A. I have been in the same business constantly.

Q. How long have you been in your present position?

A. It will be thirteen years the first day of next September.

Q. How many men are under you in your department?

A. I think there are about twenty-five hundred at present.

Q. Who selects or employs the mechanics in the mechanical department of the Central Pacific Railroad Company?

A. Well, the Master Mechanic of the department shops select their own men, usually; but engineers and firemen, I do the most of that myself.

Q. Who makes the selection of foreman and assistant foreman of the shops?

A. I have done that up to the present time.

Q. And engineers mostly?

A. Yes.

Q. I will ask you if you are acquainted with Mr. Clark?

A. I am very well acquainted with him.

Q. And Mr. Wallace?

A. Yes.

Q. Do you know anything about Mr. Clark's skill and ability?

A. I do.

Q. What is it?

A. It is good. I think him a good mechanic, and a very good one.

Q. And Mr. Wallace?

A. The same.

Q. Do you know Bernard Kelley?

A. I have known him for twelve years past.

Q. What is his business?

A. Locomotive engineer.

Q. I will ask you to take that model and give just a brief explanation of the different parts there involved regarding the matters in this case?

A. I do not know as I can add much to Mr. McKenzie's explanation. He went over it pretty thoroughly. (The witness here took the model of locomotive and explained to the jury the different parts of the machinery in and about the driving boxes, brasses, wedges, side-rods, and the application of the steam.) That shows the driving boxes, brasses, and wedges; the driving boxes are alike, all four of them, and the wedges are all alike. The brass fits in here for the bearing (showing.) It is often necessary to let it play up and down in the jaws. These wedges are kept set up by the engineer, and kept in their proper places. Of course, they get careless, sometimes, and let them wear. This is the side-rod.

A JUROR.—Could this be tightened up if that got loose?

A. Certainly.

MR. DENSON.—I will ask you to explain in regard to the keys, etc., at the end of the rods?

A. If there is any lost motion in that box that rod is made strong enough to hold that (showing.)

Q. You might explain another thing, as to the brass bearings on the journal of the axle?

A. That represents it there. You can knock out that brass and put in another one very easily.

Q. I want to have you explain the wedges a little more fully and accurately than has been done yet. Just explain it in a few minutes, and as short as you can—explain the shape, locality, and use of the wedge. You have given an explanation, but the jurors did not all hear.

A. That is supposed to represent the wedge, there, although that is not a proper shoe; that wedge comes out here with a flange on both sides, to prevent the jaw from wearing. The wedges are put in there to prevent the play up and down, and that is all they are for.

Q. Is it proper or right that all those wedges should be tight?

A. No, sir; if driven in tight there it might want a little play there, and it would break; it must be free, so the wheels can work free. Sometimes these get stuck up, and then the engine is a pretty bad place to ride.

Q. What is the object in setting up the wedges?

A. Simply to take up the play in the boxes.

Q. Is it or is it not a fact that constant wearing upon all the brasses will tend to create much looseness in the machine?

A. Yes. The wedge is put there for that purpose only.

Q. To tighten up?

A. Yes. If it was not so, the box could just as well be without it as with it.

Q. Now, this question of thump in an engine. Have you ever run an engine yourself?

A. Yes; I ran an engine about eight years of my life.

Q. What roads did you run on?

A. Principally on the Burlington and Quincy, but I have run over the other roads in Illinois.

Q. Have you run more than one engine?

A. Yes. How many, I do not know.

Q. That is, from different factories, or only one?

A. Yes; different ones.

Q. In your opinion as to this lost motion or thumping—or whatever you call it—is that unusual?

A. That is not unusual; in fact, that is a usual thing. It is very usual for engines to thump more or less. I suppose an engine put up so it would not thump could not run over twenty miles without heating.

Q. As a man with an experience of that kind, if you got upon an engine and found her thumping here, slightly, would you consider that, or would you not consider that an indication of danger, or some defect of the machine?

A. No, sir; not unless it was very violent—very heavy.

Q. Suppose there was a play of say not to exceed one thirty-second of an inch in the box or brass upon the drivers, how would you regard that?

A. Well, I should not regard it as anything dangerous, at all. It is a common practice to run rods one sixteenth of an inch loose, and very common, and the play in the driving box is the same, or if anything, worse.

Q. Suppose there is a looseness even in one of the driving boxes, as a mechanical fact, would that make a thump in one box, or would it be distributed all over to the other bearings to a greater or less extent?

A. I cannot understand how a back driving box could thump and not be in the forward one. I do not see how the back wheel moves unless the forward one does. I never saw an engine in my life that did have a thump in one box, but what had it in all of them; and an engineer standing right over them, he might notice it in the back driving box, and it might be worse than the front brass.

Q. How can you explain that fact as bearing upon one of the side-rods?

A. Well, when once an engine takes steam she takes steam on the center (showing), and you turn the wheel this way (showing.) That bar turns that way, and turns the wheel that way, until that gets up to the center, and this pushes tight against both axles, and if the slack is just the same in this box as in that, both wheels move together. You could not move that wheel one tenth of an inch, unless you move that one

(showing); that is impossible. This is the same as that; this wheel receives the power first; just make that one tenth of that, and you cannot run. They usually run these rods a little slack; we do not pretend to run them without slack of about one tenth of an inch at each end, and find they are all the better for it.

Q. What is the shape of the brass bearings in that driving box?

A. Well, semi-circular; thicker on the top than on the side; made of three pieces, composed of what we call crown and two side pieces. That would show it very well if it was more like that (showing.) That is the key, and bolted together through there, which holds them to their place, and a screw on top of it to hold it there (showing.)

Q. Now, Mr. Stevens, I understand you, from your explanation of the diagram, the brasses are not shaped like that?

A. We make them, if anything thicker, and allow for the wear.

Q. Make them thicker at the top?

A. Yes.

Q. Where the brass rests on the axle?

A. Rests directly on the center.

Q. If that machine is allowed to come to a stop, and when it rests, where does it naturally bear?

A. Bears on the center. You cannot hold it away from there unless using great force.

Q. Would it or would it not require considerable force on the bar and crank, and on that axle, to bear this weight from the center of the bearing?

A. Yes.

Q. No matter if there was play or not?

A. I do not understand the question.

Q. How much force would have to be thrown on the side-rod, or any other part of the machinery whose duty it was to revolve the crank upon that axle, to move that axle out of its proper place on the center of the brasses?

A. It would take very much. I could not tell how much. It would depend on the weight of the engine and the size of the bars. The parallel rods running or coupling the wheels together are supposed to be made strong enough to hold them in the center; so the rod passing from there to those and the crank pins, are made strong enough to sustain that.

Q. Have you studied this question of the breaking of side-rods?

A. Well, somewhat. I have had considerable experience in that line of business.

Q. Have you ever known a case where a side-rod broke without some perceptible cause for it?

A. I have known rods breaking where I could not discover the cause, although I suppose there was some reason for it. We have had rods break where I could not tell the cause, nor any one else—the rod strong and sound, and apparently very good iron.

Q. Do you know of the works where this engine was built?

A. I do; yes.

Q. Do you know the reputation?

A. I know the reputation of the Superintendent, Mr. Heally, very well.

Q. And of the engine?

A. Yes.

Q. How do the engines stand in the railroad shops or world?

A. They stand first-class. We have something like seventy-five—fifty or seventy-five—on this road, and we have no smarter engine.

Q. What has been your experience with them?

A. Most satisfactory. They are more economical, and what we call the smartest engine we have.

Q. Are you acquainted with this No. 94?

A. Quite well.

Q. What kind of an engine was she?

A. Quite good.

Q. What kind of condition was she kept—was she allowed to run down?

A. I suppose she was kept in first-rate repair. Of course, I don't know her condition at that time. We don't pretend to run them after they get run down much.

Q. How long does a good engine—say the build of this one—will it generally run without overhauling or repairs?

A. A first-class engine, and an engine as good as she is, would take that passenger train, at the time she broke, without more than the ordinary wear and tear. She ought to run three or four years. They generally do on that road.

Q. Without any general overhauling?

A. I do not mean to say that without any work. Of course, there are little jobs for the engineer to do every trip back.

Q. What would the probable cost be?

A. Tightening brasses, etc., every trip—we call that a running trip—she might cost from two to three, say four hundred dollars.

Q. What would be her condition?

A. We always intend to turn out an engine as good as new, and if new engines and new boiler, perhaps two thousand dollars.

Q. What is the custom, when you take an engine in the shop, as to the extent of repairs?

A. Sometimes we have an engine in the shop for overhauling; we turn the tire and overhaul her generally; that perhaps we would not have done that for a year. We often do that work on them that we would not have to do then, but work we would have to do by and by.

Q. I will ask you just to explain the action, if you please, of an engine rounding a curve—how the wheels are, and how they are moving and held, etc.?

A. Those wheels hold the same position exactly, on a curve as on a straight line. They cannot do any different; they cannot change position at all.

Q. How is it as to slipping or sliding?

A. It is understood and natural, that on a curve there is more or less sliding, whether the wheels on the outside or inside, we cannot tell. The wheels are usually turned a little coneing, to make up for what there usually is. For instance, where the curves are ten degrees of a curve, the cones usually make up the difference. Of course, it would wear down and be a little large close to the flange.

Q. Which is the largest?

A. The wheel on the outside. Of course, the tendency is to run on the outside; the centripital is to the outside. There the flange is the largest, and there is the greatest diameter.

Q. Has that any effect on the side-rod?

A. I cannot see how it can have. If we were going around, and this is the largest wheel—if this wheel slips that must slip, and if both slip alike, there is no strain on the bar.

Q. Now, as a matter of fact, is the side-rod able to slip the wheel?

A. Yes; the side-rod is made heavy, invariably heavy. This one has to take the full force of the engine, and that one has to move these wheels.

Q. What carries the wheels around when letting go or slipping on the track?

A. This main connecting rod turns this, and of course the motion is given to the parallel rods.

Q. Then, as I understand, the wheels all slip?

A. Yes; they all slip. Sometimes an engine slips much faster, as when coupled to a train, because she loses that adhesiveness, making five or six revolutions in a second.

Q. Did you examine this engine after it came in?

A. I did not.

Q. So you do not know anything about it?

A. I do not think I was here at the time.

Q. As to the life of a side-rod—how long do they usually run?

A. I do not know how long they would run. I have known them running eighteen years. I saw an engine when

I was down in New Hampshire, that the rod was put in in 1850—that is thirty-three years ago. I have read of them running in England twenty-five years, that have a sixteenth and upward of play. I have not seen them, but I have no doubt of it.

Cross Examination.

MR. BEATTY.—You are the Master Mechanic of the Central Pacific shops at Sacramento?

A. Yes, sir.

Q. And as such have charge of all the machinery?

A. All the locomotives.

Q. Is all of its locomotive machinery under your charge?

A. I have charge of the steamboats somewhat.

Q. What inspection do you make of locomotives in order to determine if they need repairs?

A. Well, for one thing, we have a boiler inspector, the same as the United States Boiler Inspector. He travels from one road to the other, and tests the one hundred and fifty pounds pressure. When we run an engine out we put an engineer on her to take care of her, and who is supposed to be held responsible for that; and we hold him responsible for that. If they report work we do it, unless we don't think it is necessary to do so.

Q. If an engineer reports work, who attends to it?

A. It is left, as I say, to the foreman. The work is done if it is necessary to be done.

Q. Suppose it is not done?

A. Then we don't consider it necessary.

Q. What is the condition, supposing the foreman refuses to do so at his request?

A. It is his duty to report to the Master Mechanic. He might not think so after an explanation. I have made an examination of engines, after which I was satisfied that they were not necessary to be made, and they were not made.

Q. The only inspection of engines is that which the engineer is expected to make of his own locomotive?

A. We trust it greatly to him. We would trust the boiler inspection to him if he could inspect them, but he cannot.

Q. In most instances I presume locomotive engineers are not mechanics?

A. Some of them are, but most of them are not.

Q. Mr. Kelly is not?

A. No, sir.

Q. He is merely a runner of locomotive engines?

A. Yes; it is not necessary for a locomotive engineer to be a machinist to be a good engineer.

Q. It requires the skill of a machinist on a locomotive to keep it in good order?

A. No, sir; not necessarily.

Q. Do locomotive engineers who possess no other skill than that tell whether their engine is in good condition or not?

A. He can form a pretty good idea, if he does his duty.

Q. Do you think he can do it?

A. I think he can if he understands his business as he should.

Q. Without any skill as a machinist?

A. He might not know. We often have men make a report that there is something the matter with the engine, and comes to me. He does not know—he cannot tell—but he gets on and explains it, and the machinists can tell what is the matter. For instance, a valve blowing or leaking is a common thing one would say was the trouble—it was in the blow-off valve. The other would say the steam pipe is leaking; that is the difference between the two men. But the engineers would tell where it was leaking.

Q. Do you think Mr. Kelly was a good engineer, and reported work when it was necessary?

A. I suppose he did. He never reported to me; he reported at the requisite places, I suppose; they all do that.

Q. He had charge of the engine that got broke?

A. Yes.

Q. You did not make any inspection before or after the accident?

A. No.

Q. How do you know that he reported that engine—that that engine needed repairs?

A. I know from what they say.

Q. You must not know from what they say.

A. That is all the way I know anything about it. I did not see the engine.

Q. You do not know that with that particular engine he was careful?

A. Only from his own statement, and from what I heard other witnesses say. I was not there.

Q. You have been a locomotive engineer?

A. I have.

Q. For how long?

A. About eight years, I think.

Q. And run on a good many different engines?

A. Yes; quite a number.

Q. And you have heard this thump, I suppose?

A. Yes.

Q. You say that is always heard in locomotives?

A. I have never seen an engine working hard that did not thump more or less.

Q. When first turned out?

A. I don't care, when first turned out or not, or whether she had been running. A great many people who never run an engine imagine they know all about it. I have seen men who imagined they knew a damn sight more than I did, and I have been through the mill and know all about it.

Q. I understood you to say there is a certain amount of jar in the boxes of a locomotive, even in the best of them, and they in the best repair?

A. I say it is impossible to put up a locomotive engine, or any other engine, and make her perfectly tight in all her bearings, especially and run her without heating.

Q. The thump takes place I suppose in an engine in good

repair. Would not prevent the thumping in a locomotive engine?

A. Not much. He would not expect it.

Q. That is something a locomotive engineer would expect to find?

A. Yes; I don't suppose there is an engine at work but what if you put her to right hard work, she would thump more or less.

Q. It don't cut or pound at such a rate, as I understand, as will be apparent?

A. Sometimes the bearings will be cut out. I have known engines coming in there with these two brasses gone entirely (showing.)

Q. Then there would be a thump there?

A. A probable implied one.

Q. There would be sometimes a thump in one of those boxes that would be sufficiently unusual to break out that brass—would not entirely cut it out, but partly cut it out?

A. No doubt of it.

Q. You say it is necessary between the wedges and the box that there should be a certain amount of play to allow the box to move up and down?

A. It is not probably necessary there should be any loss of motion there, but to work freely, for when an engine is working hard, to allow the weight thrown on these boxes, and the wedges a chance to spring.

Q. While freedom is necessary between the wedges and the boxes, it is not necessary to leave any looseness between the wedges and brasses?

A. I do not know as it is necessary.

Q. What is the reason they are not fastened tight?

A. They would heat.

Q. Does not the wedge of a locomotive press down on the brasses themselves, in order to bring them in contact as closely as possible with the axle?

A. No, sir.

Q. Don't they put those wedges in fast—fit them in tight?

A. They are supposed to fit in the box or housing pretty snug.

Q. Are not they cut to the shape and size of the axle?

A. They are the bearing for the axle, and evidently must play freely.

Q. If anything, there should be no play between the sides of the axle and the brasses?

A. Of course, when they make them new they don't propose to leave any more play than for the axle to run well.

Q. After an engine is set up new, and the brasses fit all around, and then run for a time, when it is discovered that one brass in one box is much looser than the other, is not there reason to apprehend that the brass runs looser and looser all the time?

A. They don't come loose suddenly—it is gradual—probably taken years.

Q. But when it is found that one gets much looser than the others, is not there reason to apprend that it gets looser and looser, and in time break it?

A. If the others were not loose, and this was loose, I would not touch it.

Q. Is there reason to suppose it gets looser and looser at an accelerated rate?

A. Yes; all parts of an engine wear.

Q. Would wear looser at an accelerated rate?

A. I do not know. The weight of the engine is sufficient on the journal to keep that in its place, but when she is cut loose, or when the engine is under way—what we engineers call getting under headway—you hardly hear any thump whatever.

Q. Would there be any less in moving?

A. Yes.

Q. Why?

A. Because you cannot pull her out. When an engine is under headway it takes very little to keep her going, and the weight of the engine is sufficient to keep her on the journal, and to keep it in its place.

Q. Would it not jerk when starting?

A. It might when starting.

Q. What is the reason it does not jerk after starting?

A. There is no force to make it jerk.

Q. Is not there about as much steam applied in the cylinder?

A. No, sir; when the engine is moving quickly the steam does not act as when moving slowly.

Q. The train, after it acquires momentum, does not require as much force to keep it in motion?

A. No, sir.

Q. That diminishes this thump—but does not it do away with it altogether?

A. You never can hear it. There would be some thump or pound that you will always hear.

Q. Can you understand this: If you make noises like that (illustrates) at intervals, you could hear them; but suppose those noises increased, occurring four times in a second, might not they become indistinct, so that you could not separate them?

A. I think I could detect them, and I think you could, too.

Q. After they became so rapid as that, could you detect them?

A. Four times in a second is not fast. Lost motion—as steam is applied this rod takes the whole of it. The least lost motion in that rod would not be noticed, but this is another thing, altogether. The power of that will hold that wheel exactly in the center.

Q. Did you say you could not understand how it was possible for an engineer to detect the thump in one box and not in another?

A. I do not know. I never saw it.

Q. Did you hear the testimony of Mr. Blackman and Mr. Peck?

A. I might not agree with them.

Q. Well, did you hear it?

A. I do not recollect what their testimony was in regard to that.

Q. Now, about this thing of rounding curves. You say that in rounding a curve, it is admitted that the wheels on one side must slip forward, or the other must slip backward?

A. I do; unless there is enough difference to make up the diameter, they must slip alike.

Q. The wheel on that inner rail must slip back, or the wheel on the outer rail must slip forward?

A. Yes; or it may be divided, unless, as I said, there is enough difference in the diameter of the wheels.

Q. If the axles are tight in their boxes, whatever strain is required in slipping a wheel forward or back, will be thrown upon the boxes and the jaws of the frame?

A. Probably it would; and if those parallels slip those wheels at any time, they probably slip them on the curves.

Q. But they are not intended for that?

A. Yes; that is what they are put there for, to keep those back, as well as revolve them uniformly.

Q. What is the object of having double driving wheels?

A. To get more adhesiveness.

Q. More traction or adhesion?

A. Yes; your engine draws just as much with two wheels as with four, but your track would not stand it.

Q. Your locomotive would run just as well with two as with four drivers?

A. Just as well.

Q. And there is no occasion for this exact adjustment?

A. No, sir; and we would not have this lawsuit if that was the case, and would save lots of trouble.

Q. And the object in connecting those extra wheels by means of the parallel rods is to distribute the traction?

A. Yes, sir.

Q. And they must keep them the right distance apart?

A. They must move in unison—that is, the foundation of that engine—just as much as the foundation of this house.

Q. That is intended to keep the axles right in their frames, or nearly so?

A. That is intended to keep the axles in their places.

You know, Judge, that we see ten driving wheels—four or five pairs—that is not done for ornament.

Q. The side-bars will run eighteen years?

A. Yes; some twenty-five years; some twenty years.

Q. But side-rods will break occasionally?

A. Yes.

Q. They would not break without an adequate cause?

A. I do not think so.

Q. What is your theory?

A. They may break with a good many causes. I have known engines, when running with passenger trains, and commenced running, the engine would slip and bend her rods. They may be broken by vibration. An engine running very quickly—making five or six or seven revolutions a second—the velocity of it is liable to snap it off.

Q. With no adverse circumstances, the life of a rod is from eighteen to fifty years?

A. I did not say that is the life of side-rods. I have known a great many rods for eighteen years.

Q. You say, under favorable circumstances, they run for eighteen years. Now, where rods, or driving rods, are subjected to this upward and downward movement?

A. Yes.

Q. You say that is the life of a driving rod that is subjected to this upward and downward beat?

A. Yes.

Q. Then, if rods run for thirty years, why is it that some of them break their rods in two or three years, or two or three months?

A. They might. It depends on the velocity with which they travel. These rods do the work.

Q. It has not got this up and down motion?

A. No, sir; in my opinion that is what breaks them.

Q. Why will some run eighteen or twenty years, and others a year, or two or three months only?

A. Because they don't happen to come under the favorable condition, you might ask me why locomotives run for ten

and twelve years, and others break in a month or two. It is the same reason, I think.

Q. Any driving rod has to undergo that driving up and down?

A. Certainly.

Q. Most driving rods will stand that shock if it is a shock, for a great number of years; but is not that which breaks rods, or is not that a superadded cause?

A. That engine might have run faster than ever before.

Q. But is not that sufficient to account for the breaking of the rods?

A. I think it is in most of them.

Q. If in most, why not in all.

A. In most cases the breaking of rods is what puzzles the engineers.

Q. It is subjected to that jar many more times in a fast than in a slow engine?

A. I suppose they are.

Q. They naturally break more in fast engines than in slow?

A. That is what I said.

Q. Do you know anything about crystalization of iron?

A. I am sorry to say I do not know much about it.

Q. It is an admitted fact among mechanics that the structure of iron, or iron itself, undergoes a change?

A. I believe that iron does break from that.

Q. Don't you know that experiments have been made?

A. I don't believe that parallel rods break from crystalization. I have seen experiments where shock was given several times before any change in the structure could be told.

Q. How were those experiments performed?

A. I could not tell; in various ways—so every revolution got a little shock—from roasting.

Q. You did not see those yourself?

A. No, sir; I don't know anything about it.

Q. You don't believe a bar breaks from crystalization of the iron?

A. I don't think parallel bars do. I do not know.

Q. These parallel bars are made of rolled iron?

A. No, sir; steel. We don't put rolled iron in parallel bars.

Q. Are those parallel bars steel?

A. Yes; a great many of them are.

Q. I believe Mr. Wallace said this was an iron rod?

A. I do not know.

Q. You know rods of iron, or that a piece of iron—wrought iron—would not break short off; it would bend sooner than break?

A. Perhaps it did bend.

Q. All the testimony we have is straight that it was not bent.

A. No testimony that I have heard.

Q. I will ask you the question: Will an iron bar bend before it will break?

A. Wrought iron is likely to. Good iron will bend, generally.

Q. If a wrought iron bar is good, and it should break square off without bending, is not that an evidence that it was crystalized?

A. It might be.

Q. Do you know a more probable reason than that?

A. Yes; probably the motion of the rod—the vertical motion. We used to make them heavy in the middle and small at the end; now they go the other way—not as heavy in the middle as at the ends. That is what I believe it to be—the vertical motion.

Q. You believe it is this up and down motion of rods that break, then?

A. Most of them; they may be kinked up when the engine slipped, as I told you before. Suppose an engine slips and bends that rod down that way, and bends it say a couple of inches, that would make it too short to go between the pins, and when it would come to get down there, the tension would break it. I have no doubt that it broke that way.

Q. And then the condition of the rod would be bent?

A. Yes; I have seen them badly doubled up.

NOBLE FISHER,

Recalled.

MR. BEATTY.—Do you recognize that model as being the model of a locomotive engine?

A. Yes; that is a model of the frame, cranks and cylinder.

Q. Can you explain by reference to that model, that lost motion that Mr. McKenzie and Mr. Stevens speak about when they were on the stand in their illustration—what effect, if any, lost motion had upon that place—the point in line with the cylinder. That the cylinder, in explanation, they testified as I understand them, if there was any jar from lost motion occurring, it would occur when the wheels were in that position (showing), and only when in that position. Now, I would like to have you explain, if you can, how the jar from lost motion would occur with reference to that model?

A. When an engine standing in that position, this being the left side (showing), and all points set in line with the cylinder, that engine is known as being in cushion. The cushion means that when the rear end is in this position (showing), the head of the piston would be in the rear end of the cylinder, and steam admitted to the cylinder would only take up what lost motion there was between the front and the main crank-pin, and the lost motion in the connecting rod which stands between the main crank-pin and the piston rod; there is generally a space of 3-16 or 5-16 of an inch between either end of the stroke. That is for the cushion. This cushion is to hold the concussion of the lost motion, and prevent the driving out of the cylinder-head at either stroke. If an engine was left in cushion standing on the track, the piston wedged in the center of its travel in this cylinder, and 150 or any number of pounds of steam in the boiler, and the

throttle-valve open so as to give the entire pressure of the steam to the left hand cylinder, it would have no effect on that engine; it would then be on what is known as "dead center." You have seen, likely, a stationary engine with a fly-wheel, which generally stands against the wall of a building in which it is set up, and the wall back of the wheel is filled with holes made in it, and that is provided that when an engine is standing in that position on its dead center, to insert a bar to move it, there is no possibility of the steam moving an engine standing in that position. Now, the reason fly-wheels are given to stationary engines is to start and give it momentum when it comes to that point, and that momentum carries the engine across when it comes to a dead point. In case of a locomotive, there is placed instead of a fly-wheel, these wheels. In a locomotive, each side is a perfect engine by itself, and when coupled together they overcome this dead point. This engine, you see, starts the train, and then you see directly this engine is doing absolutely nothing—for all the work this is doing it might as well be in the bottom of the Sacramento river, and of course the opposite engine does the work. This is simply a reversal of the position (showing). This is now in cushion on the forward, the same as at the back end. This engine is now doing the work, and *vice versa*, for each helps the other over the hard spot.

Q. When either of those engines is at a dead center, it is not doing any work, and the piston is not moving and there is no force to be applied?

A. Just at that particular point the steam is admitted for the purpose of cushion.

Q. Explain the term "cushion?"

A. Cushion is the length of the cylinder between the head and the rod, and is generally between 3-16 or 5-16 more than the stroke of the engine. That the cushion is provided for the steam that is admitted to take up the lost motion in the connecting rods, preventing the blowing out or the breaking out of the cylinder heads. Now there is another

point in this thing—it was proved they renewed the back axle, and it seems the reason why they renewed the back axle, was this: It proves directly that there must have been lost motion—that there was lost motion in the jaws of the frame and the boxes. That 32d of an inch that has been proven in the brass of the box, that would give an appreciable shock when the steam was admitted, that thump would take place.

Q. Will you explain why an engine might thump in the back driving box?

A. That is easily explained. If the main drivers—these are simply driven wheels, and the driving wheels take the power from the driving rods—from the piston, and if perfectly fit in the box, and it is not loose in the frame, and the brasses not loose on the crank pin, then any lost motion here cannot be told from this, until that has passed that dead center (showing), and the power has been transmitted here, because you will see immediately at a glance that if it is a perfect fit here, and the brasses are a fit there, that jar will only tell up to that point, it cannot pass beyond it. If there is a jar there it might possibly (if there is looseness here) pass and tell on that back shaft. Now, that back shaft was renewed and replaced, and it was said that the reason that it was replaced, was that the wheels were moved on the shaft and showed looseness, that was in consequence of that box and brass had at some time become loose and allowed this concussion to act on the crank of the wheels on the axle.

Q. As I understood you, there may be a thump in the back driving box without necessarily being any in the front driving box?

A. Undoubtedly.

Cross examination declined.



N. A. FISHER,

✧ Machinist, ✧ Locksmith ✧

—AND—

MODEL MAKER,

K Street, - - - SACRAMENTO.

289,904. MOVING STREET CARS ON CURVES. NOBLE
ANDREW FISHER, Sacramento, Cal. Filed Dec. 28,
1882. (No model).

Brief.—Vertical and horizontal guide-rollers at curves, the latter being supported on springs, the grip consisting of two elbow-levers the pendent arms of which nip the rope, the horizontal arms being linked to a screw-nut on an operating-rod.



Fettered Commerce.

How the Pacific Mail and the Railroads
Have Bled San Francisco.

THE
DAILY
MORNING
CALL

Is the only Metropolitan Morning Journal in San Francisco, entirely devoted to the interests of the people, having no political motives or personal ends to subserve.

THE CALL



IS BRIGHT,
SPARKLING AND
TRENCHANT.

THE CALL "hews to the line." It is the terror of evil doers, and the champion and tribune of the people.

While the CALL will not feed you on "Fakes," it will spread before you every morning the whole news the world over.

The CALL has the Ablest Editorials, the Most Brilliant Corps of Special Writers, while its Reportorial Staff is selected from the Best.

The "Special Features" of the CALL and its crusades against immorality and vice are doing much to rid our fair city of flagrant evils too long endured.

The CALL's charge against the giant monopoly which is grinding us, as it were, between the upper and the nether mill stone, will be read with interest by those into whose hands this pamphlet comes, who have not perused the columns of the CALL from day to day.

Office, 525 Montgomery St.

BRANCH OFFICE, 710 MARKET STREET.

FETTERED COMMERCE.



How the Pacific Mail and the Railroads
Have Bled San Francisco.

A Series of Articles Reprinted From
THE SAN FRANCISCO MORNING CALL.

SAN FRANCISCO:
THE DAILY MORNING CALL COMPANY.
1892.

PREFACE.

The interest which the merchants of San Francisco have taken in THE MORNING CALL's articles on the Pacific Mail subsidy affair are a sufficient excuse for the publication of this pamphlet.

Aroused as they are to the needs of the hour in this respect, the shippers of San Francisco, and of all California, are perusing every line of print with regard to the burdens which they are compelled to carry. That they may have at hand, in convenient form, the Pacific Mail articles, over which there has been so much discussion of late, this pamphlet is presented to them by

THE MORNING CALL.

SAN FRANCISCO, April 6, 1892.

FETTERED COMMERCE.

A PEOPLE of generous impulses is always likely to be imposed upon.

The extent of the imposition may be great or small. Even though great, it may be overlooked for a time, but if it be insisted upon for many years, there will at last come a day when the people will resent its wrongs, and will rise up and cry out against them.

No more striking instance of the facts named can be found anywhere than that of the present attitude of the generous, noble, and long-suffering people of San Francisco toward the freight transportation monopolies.

The great transcontinental railroads are allied with the Pacific Mail Steamship Company to throttle competition in the carrying trade.

Now, every one ought to be ready to admit that commerce by sea should be as free as the wind. In nearly every case it is, but in the case of the Pacific Mail Steamship Company it is not.

The railroads, by special contract with the Pacific Mail, ever since the year 1877 have had their own way as to freight rate-making by sea as well as by land between the Atlantic Coast and the Pacific.

Heavy subsidies have been paid, ranging from \$110,000 a month to \$75,000, to the Mail Company by the railroads to stifle competition, and to keep up rates of freight at a standard of "all the traffic will bear."

Strange, is it not, that the people of California should have borne this imposition for nearly fifteen years without having made one effective protest?

See how far-reaching is the effect of this competition-throttling arrangement:

It makes the cost of living very high.

It makes the shippers' profits very small.

It places a strong check upon immigration.

It retards the growth of trade.

It makes general prosperity impossible.

The San Francisco MORNING CALL, in a series of stirring articles on this

subject, has shown many important facts in relation thereto that have never before been brought to public attention.

It has shown that the amount of the subsidy paid by the Southern and Central Pacific and other railroads to the Pacific Mail to throttle competition and maintain high rates of freight has in fourteen years amounted to \$14,555,000.

This money, THE CALL claims, has been, practically speaking, so much plunder taken from San Francisco and given to the Mail Company.

This assertion is borne out by the testimony of a large number of shippers, printed in THE CALL.

It is also maintained that the Mail Company is showing a listless spirit with relation to the carriage of freight between New York and San Francisco. Its own agents admit that they do not care to quote rates of freight to San Francisco shippers on shipments from New York to California. The Mail Company is keeping out of the traffic as much as it can, and is relying upon its subsidy from the railroads to a great extent for its earnings. It also receives a large subsidy from the government.

In an article published in THE CALL on March 8, 1892, the shippers of San Francisco are quoted as being very much in favor of petitioning Congress to withdraw the subsidy paid by the government, on the ground of its illegal compact with the railroads. The covert manner in which the railroad subsidy is paid to the Mail Company is also shown in that article. The railroads pay a rental of \$75,000 a month to the Pacific Mail for space in its steamers. Sometimes the space taken is filled with freight, but more generally it is not, and the steamship company then has the room to fill up its steamers with Central American freight, taken at very high rates.

In several of THE CALL articles reference is made to the fact that San Francisco is practically barred out of the Central American trade, because of the "perpendicular rates" that are charged by the Pacific Mail on nearly every class of freight. It costs as much to ship a ton of merchandise from San Francisco to the Central American ports as it does to ship it clear across the Pacific to Australia or China, although the distance in the latter cases is two to three times as great.

THE CALL shows, in an elaborate article published on March 21st, that the Pacific Mail, being so heavily subsidized, is ready to let all classes of freight slip away from it, and away from San Francisco. Particular reference is made to tea in that article, and it is shown that through the indifference to its own and to San Francisco's interests that port has lost much of its tea trade. The rates charged by the Pacific Mail and the railroads on

tea from Yokohama to Salt Lake City, Denver, and Missouri River points are $2\frac{3}{4}$ cents a pound, while from Yokohama to the same points via the Northern Pacific or Union Pacific lines of steamers or sailing vessels the rate is only $1\frac{1}{2}$ cents a pound. San Francisco merchants are actually importing tea for customers in Salt Lake City through Portland instead of through their own port.

In another article it is shown that it is cheaper to ship Brazilian coffee from Rio de Janeiro to Chicago, or even to Denver, via New York than it is to ship Guatemalan coffee to those cities via San Francisco, because of the enormous charges made by the steamship monopoly and the railroads, which are discriminating against San Francisco in every way possible. The rate on coffee from New York to San Francisco is \$1.35 a hundred pounds, while a rate of \$1.30 a hundred pounds is charged to the San Francisco shipper of Guatemalan coffee, even though he desires to ship his coffee for no greater distance than that from San Francisco to Denver.

It is shown that the Pacific Mail has two schedules of freight rates — one for its favorite shippers and another for the persons whom it does not care to favor.

THE CALL also tells a striking story regarding the loss of the China cotton trade to San Francisco, thousands of tons of cotton that used to be carried by the Pacific Mail has been permitted to slip away from that company's control, and go to its competitors.

All this is a great loss to San Francisco.

Geographically considered, much is due to the city by the Golden Gate. Her treatment by the transportation companies is very, very shabby.

Those corporations have made their millions out of her, but they treat her with scorn, and will make no returns for the enormous profits they have received.

THE CALL has aroused public interest in the matter, but nothing will be done to eradicate the great evil unless there shall be a popular movement of some kind among the citizens of San Francisco.

Some strong and effective measure must be taken.

Congress should be appealed to.

Whatever is done, it should be done quickly.

San Francisco is being bled at every pore.

She must be released from the grasp of monopolistic carriers.

The blow should be struck at once.

FOURTEEN YEARS' PLUNDER.

March 5, 1892.

Pacific Mail Subsidy from the railroads, to stifle competition and retard the growth of San Francisco, from August, 1877, to June, 1884, at \$110,000 a month.....	\$8,000,000
From June, 1884, to June, 1885, at \$95,000 a month.....	1,140,000
From June 20, 1885, to March 20, 1886, at \$85,000 a month.....	765,000
From January 1, 1887, to March 1, 1892, at \$75,000 a month.....	4,650 000
Total.....	<u>\$14 555,000</u>

Big as those figures are they do not represent a tenth part of the actual loss to San Francisco as a mercantile community from the results of the choking off of steamship competition by the railroads. For years the merchants have known of this great drain upon them, but all they have been able to do thus far has been to look at each other and say: "It's a great pity, but how can we prevent it?"

At last they have made up their minds that they can prevent it if they go about it in the right way, and under the generalship of President James B. Stetson of the Traffic Association they are about to begin the attack.

"We are not going to sit still and let this thing go on any longer," said Mr. Stetson to a CALL reporter yesterday. "We have begun in earnest, and we have secured powerful aid on our side. No adequate idea of the wide extent of the injury done to San Francisco by the payment of this subsidy

and the stifling of competition has been had by our people. But with the aid of as good a railroad expert as there is in the State we have been digging into the secret corners of the thing a little. Now we are nearly prepared to begin our fight and rid San Francisco of this incubus upon its healthy and natural growth."

Mr. Stetson told the reporter where he could go to get the facts and figures to which he had had access, and when these were obtained it was seen that he had just cause for waging war against the evil.

Hidden away down deep has been this matter of the Pacific Mail subsidy from the railroads. Its existence has never been doubted, but its details were covered with the haze which always surrounds such affairs.

To run suddenly up against the naked machinery of the combination startles one, particularly if he has a reverence for big figures which represent good solid American dollars.

The fact that in less than fifteen years the Pacific Mail Steamship Company has virtually received \$14,555,000 from the overland railroads in order that they might enjoy the traffic without disturbance and make such rates as they may choose is in itself a great uncompromising and very ugly fact for our shippers to contemplate, but to think that that sort of thing must continue in spite of all laws to the contrary is an intolerable thought for them. But it is going on now and will continue, unless the Traffic Association's fight shall be a successful one, which every shipper fondly hopes.

From the figures obtained it is known that under its contract with the Transcontinental Association the Pacific Mail receives \$75,000 a month to maintain rates and let the traffic of the railroads severely alone. This \$75,000 is not paid out flat, to be charged to subsidy account, or anything of the sort. No, indeed, that would not do, for if the Government knew that a portion of its 25 per cent interest in the earnings of

the Central and Union Pacific were paid to buy off competition it would not stand that kind of nonsense a month.

So the money is paid in this way: The Transcontinental Association takes a certain space of tonnage measurement in each Mail steamer leaving New York for this city, or leaving San Francisco for New York. This space amounts to 1200 tons each way monthly, or 2400 tons in all, and the rate per ton paid is a little over \$30. It is cheap at that price to the railroads, whether it be filled with freight or not, and it often is not filled—for it keeps the Mail Company in a good, prosperous, well-satisfied condition, leaving it no incentive to increase its traffic by running more steamers, and making it altogether a fat, happy-go-lucky concern that can coin nearly \$1,000,000 a year, whether it performs any real service for the payment or not, besides leaving it

ment and that the withdrawal of the mail subsidy should be made at once unless the steamship line is set to work as a purely competitive concern, from which San Francisco can reap some little benefit at least.

Senator Felton has become greatly interested in the fight to place the common carriers by water and rail on a competitive footing. He has prepared a bill which provides for the withholding of the subsidy paid by the Government on the ground that the Mail Company has entered into contracts with the overland railroads that are against public policy.

The San Diego people will no doubt be willing to uphold Mr. Felton in this measure, as they declare the Mail Company is not carrying out its contracts with the Government and is giving a very inadequate service.



VIEW NEAR THE ENTRANCE TO PACIFIC MAIL DOCK.

some good pickings in the Central American trade which the railroads cannot possibly handle.

What makes the San Francisco shippers particularly wroth about this subsidy matter at this particular time is that the Government is now paying the Pacific Mail Company a large subsidy for carrying the Central American and Chinese mails. It is not exactly known what this subsidy will amount to in the course of a year, as it is computed on a mileage basis. But our merchants have come to the conclusion that, whatever it is, it should be withheld by the Government until there shall be an end of the subsidy compact between the steamship company and the Transcontinental Association. They claim that San Francisco's position as a distributing point demands some consideration at the hands of the Govern-

The Government is directly interested in the matter in another way. Under an act passed in 1862 the Central and Union Pacific railroads became bound to pay the Government 5 per cent of their net earnings, to be employed toward the cancellation of the railroad subsidy bonds. By the provisions of the Thurman act, passed on April 24, 1873, the amount which the roads were required to pay was increased to 25 per cent. The net earnings, according to this act, were defined as that portion of the gross earnings which remained after operating expenses, repairs and interest on the first mortgage bonds had been deducted. Before the passage of the Thurman act, or in August, 1877, the Central and Union Pacific Railroad companies entered into a contract with the Pacific Mail Steamship Company by which,

in consideration of certain sums, payable at regular stated periods, the steamship corporation agreed to maintain rates on such a basis as would prevent anything like actual competition in overland traffic. That contract has been renewed on three different occasions since that time, and has been modified in that instead of the Central and Union Pacific guaranteeing the subsidy it is now guaranteed and paid by all the lines in the Transcontinental Association. Some of those lines, and particularly the Northern and Canadian Pacific, derive no benefit from the arrangement, and they have made repeated protests against paying their share of the bundle that goes to the Mail Company. But they have paid just the same, for they must do this in order to belong to the association, and they would not miss the benefits it bestows for a good deal.

In the view taken by the Government a subsidy paid to a competing carrier cannot be rightly regarded as "operating expenses," and if Horace A. Taylor, the United States Railroad Commissioner, who is now examining the books of the Southern Pacific Company, can find data showing the payment of the subsidy—which, of course, he cannot, as the books are not kept that way—he will discover a mare's nest in which the Government revenue plays or should play a part.

For a long time after the interstate commerce law went into effect the railroads, not being sure of their position, cautioned the steamship people to keep the matter of the subsidy out of sight as much as possible, which they did. It was not long, however, before it was seen by the members of the Transcontinental Association that the law was not destined to do them any particular injury, and they made no attempt to conceal the fact that they were in combination with the steamship corporation, though they would never tell what the subsidy consisted of, what its total amount was or how it was paid. Those facts are, however, now in the possession of THE CALL's readers.

"The steamship company does not seem to want to carry westbound freight from New York if it is destined for San Francisco" has been a remark frequently made by merchants of this city.

Not long ago a local firm offered the company a large shipment of merchandise from New York to this port. The steamship agents did not exactly refuse the shipment, but they plainly intimated that they did not care for it, and would, in fact, quote no rates on the goods.

"I thought you were in the carrying trade," remarked the shipper. "If my representative in New York should offer your people there the freight I hardly think, as common carriers, they would dare to refuse to take it."

"Oh, we'll take it, if you insist upon it; but you might just as well give it to the railroads; they make the rates. There's no appreciable difference," was the reply.

"I see there is not," said the shipper, "and therefore I will have my freight come around by the Horn." Which he did.

When a CALL reporter went among the merchants yesterday it was found that not a few of them had been told by the agents of the steamship line that their freight from New York was not desired by the company. Eastbound freight would, however, be taken without any objection.

The reason for this is that dry goods, and in fact merchandise of different kinds from New York, take a high rate of freight by rail, and that the eastbound freight, being as a rule of a cheaper class, takes a much lower class of rates. Thus the Pacific Mail, after receiving its little \$75,000 a month, modestly steps aside and lets the railroads take the very cream of the business.

"Even this high-class freight—silks, woollens, dress goods and many other articles of merchandise—would be shipped here at low rates," said a merchant yesterday, "if it were not for the Pacific Mail receiving this confounded subsidy. It's all wrong; and I tell you, sir, that if the Government goes on paying its subsidy to the Mail Company, and thus still further discouraging it from legitimate competition, it will stand as a sort of a partner in a transaction which has for years injured our trade. This railroad subsidy is just so much money out of our pockets."

In order to test the truth of the assertion that the Pacific Mail is not making rates in this city for westbound freight from New York a CALL reporter suddenly became a shipper of freight, and going to the office of the Mail Company on Front street, near California, he made an inquiry for rates on a shipment of furniture.

"Can't make any rates," said the man at the window.

"Have you no westbound freight tariff?" asked the reporter.

"No."

"But the railroads have."

"I know it, but this is a steamship line."

"Is it not in competition with the railroads?"

The agent gave the shipper a pitying look. It was evidently too bad there could have to be another trusting mind undecieved as to the true situation.

"As a matter of fact it is not. The Transcontinental Association runs the whole business."

"But is your company a member of the Transcontinental Association?"

"No, but it might as well be. They make the rates for us. All we do is to take what freight the railroads don't want. That is about the size of it."

"But would it not pay you to haul freight anyway, and let the railroads look out for themselves?"

"I don't know whether it would or not. You'll have to ask the company if you want an answer to the question. They know their business better than I do."

"Do you carry much California freight from New York?"

"Very little."

"The railroads get nearly all of it, then."

"Yes, our people don't care if they get only enough for ballast. There are times of the year when Central American freights over our line are pretty heavy, so we don't lack for actual business. The Central American traffic pays very well. The company gets about \$16 a ton for it, space measurement or actual weight."

"Then you are open for New York business of some kind?"

"Oh, yes; but we don't bother much about freight that would naturally come overland."

What was meant to be implied by the first remark was that the freight which the railroads were after the steamship company was not after.

As showing the fact that practically the same condition of things prevails as to freights from San Francisco to New York, it was learned that the Mail Company employs no solicitors to go about regularly to drum up business, as the railroads do. It

evidently does not care for any more business than may actually fall into its hands. And for a very good reason—it is paid not to care.

There is plenty of evidence that the Mail Company is content to pocket its subsidies, reaching out one hand to the Government and the other to the railroads—and let its business go into decline. Every employe of the company knows that the service is suffering from dry-rot. The steamers cannot make the time they could if they were properly repaired and attended to at the end of each trip. The *City of Peking*, which is three days overdue at this port because of her bad condition, is a striking instance of this neglect and its consequent decay. The *Peking*, when launched, was one of the finest examples of marine architecture afloat; to-day she is driven by engines that, through want of timely overhauling, send her through the water at a speed which hardly equals that of the average ocean tramp. Although she is badly in need of repairs, it is understood nothing will be done to her on her arrival here, but she will be dispatched to China on the return voyage Saturday next.

THAT SPACE RENTAL.

March 6, 1892.

"THE CALL has stirred 'em from the bottom," said a leading merchant on 'Change yesterday. "Its article on the Pacific Mail subsidy was a center stab."

"Very timely, too," said the man at his left.

"And very true," said the man at his right.

"Well, it is high time something were done, and it will be a big feather in the cap of J. D. Leeds of the Traffic Association if he can accomplish what he is aiming at," said the first speaker.

"He'll do it if the members of the association stand by him and give him their support," said another man.

The notice created a greater discussion on 'Change than anything that has appeared in the papers for some time. The fact that the railroads have paid nearly \$15,-000,000 to stifle competition by way of Pan-

ama is something that the merchants cannot get over, and they are aiding the Traffic Association in every way possible to make its fight a hot one.

"The railroads pay the Pacific Mail twice as much for space as it could get from shippers

under ordinary conditions, and three times as much as it could get if there were lively competition," said a railroad expert yesterday.

"How is that?" asked THE CALL man.

"Well, you see, that \$75,000 a month, which the Transcontinental Association pays for space in the Pacific Mail steamers, is rated at a little over \$30 a ton. If the mail company was not in the combination rates would go down so that it would only get \$10 to \$15 a ton."

"But is the space taken all filled?"

"No; but enough of it is occupied with eastbound freight, with just a little west-bound now and then to make up ballast, so that the railroads get back some of the money which they pay out. They pay \$900,000 to \$1,000,000 a year for 'space,' and that space earns about \$400,000 as a freight-carrying proposition. This leaves the railroads only about \$500,000 to pay in actual cash over and above what is earned by the space."

"Then the Transcontinental Association is really in the steamship business?"

"That is what it amounts to. They buy and sell space aboard the steamer just the same as if they were commission men or freight brokers."

In the course of further investigation of the matter the CALL reporter stumbled upon some curious facts which show the wide-reaching effect of the choking off of the Pacific Mail's competition by the railroads. Not only does the Transcontinental Association keep the steamships under its thumb, but it exerts an unholy influence upon the clipper-ship lines. How this is done can be easily understood when it is known that if steamship rates from New York to San Francisco are firm at \$15 a ton the clipper-ship rates on certain classes of goods are firm at the same figure.

"But how about the competition with the railroads?" is asked.

Now, here comes in the fine work of the railroad people.

"You keep your rates up at about the same figure as the steamship lines," the railroad men say to the clipper-ship men, "and we will make it all right with you."

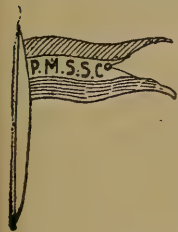
"Will you give us a subsidy?"

"No, but we will give you plenty of freight."

"What kind of freight?"

"Railroad iron and railroad supplies—cheap stuff that we can't get over the trunk lines to our roads without paying more than we care to for the hauling of it."

And so the contract is made, and the rates around the Horn are not low enough to afford the shipper any inducement to send or bring his goods by that route. Thus, prac-



tically speaking, competition in the transportation business between this city and New York is smothered all around.

For great is the power of the Transcontinental Association.

Senator Felton writes to a prominent member of the Traffic Association in this city that he has taken up his fight against the Pacific Mail subsidy in earnest.

"I think," he says, "that it is a matter which the San Francisco merchants ought to keep agitating until something is done. I can readily see how great a thing the removal of the railroad subsidy will be for California."

Here is the language of Mr. Felton's bill, following the portion of the section fixing the rate of compensation to be paid for ocean mail service at \$4 a mile for first-class ships, \$2 for second class and \$1 for third class:

And provided further, that no steamship so employed, and no person or persons, or company, controlling, owning or running such steamship shall be a part of any combination, association, pool or understanding whatever, to fix, or alter or prorate passenger or freight rates, with any competing steam or railroad lines, or do any other thing whereby the competition of such steamship shall be affected, or traffic on it or by it lessened or discouraged, or its standing and effect as an independent competing line shall in any way be affected; and before said steamship, or person or persons, or company shall be paid for carrying the mails, it shall be established to the satisfaction of the Postmaster-General that this proviso has not been violated by such steamship, or person or persons, or company.

In reference to this bill a letter has been sent by President James B. Stetson of the Traffic Association to Senator Felton, in which criticism is passed upon the bill. The writer of the letter says:

If this bill, with amendments, becomes a law what effect would it have upon contracts which cover a period of years, which may have been made between the Postmaster-General and steamship lines prior to its passage, although the said contracts may not yet be in operation?

Suppose further, that such arrangements as it is sought by this bill to cover assume the shape of a lease of the freight or passenger carrying capacity, or any part of it, of said steamships from one port in the United States to another.

It appears to me that it would be necessary to cover the case by a still further amendment prohibiting the leasing to another or other carriers or individuals, or in any other way

placing the control of their freight or passenger traffic out of their own hands. In other words, to prohibit the Postmaster-General from making any contract under the act with any steamship company which does not in every respect manage and operate their freight and passenger traffic under the same management with whom his contract is made.

It might be considered a hardship to tie them up as hard and fast as is contemplated by the above, but if the case I have in mind is to be met or properly reached it would appear to me to be necessary.

I believe that information can be found as to the arrangement between the Pacific Mail Steamship Company and the Transcontinental Association which will outline a case to be met on the lines contemplated by Mr. Felton's bill.

Of course, the price paid to the Pacific Mail Steamship Company by the roads for space rental is excessive for the services performed and greatly in advance of any sum which could be earned by the steamship company in the space allotted under the contract, if applied on the class of freight carried—in fact more than is earned by the all-rail lines on a similar amount of tonnage in the aggregate from New York to San Francisco.

It is plainly evident to any one at all conversant with the condition in the case that *the intent is subsidy*, pure and simple.

Yet the case is so susceptible of technicalities that the difficulties in reaching it to absolutely break it up are very great. Besides there still remains this feature of the case: Even though a bill can be so framed as to be all sufficient for future cases, does it or can it vitiate a contract already made and signed for a period of time between the Postmaster-General and a steamship company?

It would appear to me, if such parties were not in violation of an existing law when such contracts are made, they would naturally hold good for the period for which they are executed.

If, however, the case is different, and payment under such contracts can be suspended until the steamship company is able to prove that it is not engaged in such objectionable or illegal combination, it would seem as though it could be reached and be obliged to desist from such practices.

This thing as it now exists is something which the commercial interests of the Pacific Coast and of California in particular should no longer be subjected to.

In plain English, *they are paying the necessary price to impose an unnatural burden upon their commerce.*

So it will be seen that the Traffic Association as well as Mr. Felton is in earnest in this matter. A big fight has been commenced, and it will not cease until something is heard to drop.

THROTTLING COMPETITION.

March 8, 1892.

Competition-choking subsidy of the Pacific Mail paid by the railroads for fourteen years to March 1, 1892.....	\$14,555,000
For the next ten years at the same average of \$1,040,000 a year.....	10,400,000
Total	\$24,955,000

"We merchants don't like the prospects," said the shipper who made the above calculation yesterday.

Can any one blame them?

Looking into the future is no more encouraging than is the backward glance in this case. The merchants declare that the \$14,555,000 already paid by the railroads to shut off steamship competition, as pointed out by THE CALL last Saturday, should never have been permitted to have gone into the coffers of the Pacific Mail.

"Who paid that money?" asked a leading shipper last evening. "Did it come out of the railroad companies? Not a bit of it. We people of California paid it ourselves. We have only ourselves to blame. We should have been awake to what was going on. We should have stopped this thing long ago."

The Traffic Association people do not think it is too late yet.

"We are going to do our best to stop this unfair arrangement," said President Stetson yesterday. "The Traffic Association will bring its entire force to bear in assisting Senator Felton in his fight. He is going to introduce a resolution asking for the withholding of the subsidy paid by the Government to the Mail Company. That will bring the Pacific Mail people to terms, we think."

"But how do you intend to proceed?"

"My plan is to draft a petition to Congress in support of Mr. Felton's measure.

That petition will call attention to the way in which the steamship company is combining with the railroads, and it will set forth the facts of the case in such a way that Congress cannot but see the necessity of the action proposed.

"Do you think you can get signers to such a petition?"

"Plenty of them. Every merchant who ships freight by rail can be readily made to see that the combination as it is now working is aimed directly against his interests and against the interests of San Francisco."

"But the Pacific Mail's power is great, both in a political and private way."

"I know that, and I realize that there may be some of the shippers who may deem it to their interest to keep quiet, but I am sure that all those who can be made to see what is dependent upon the effort will be with us. We will send such a petition to Congress as will make the case plain and secure a hearing for our side."

Mr. Stetson talked at some length about the subsidy and showed that he was perfectly familiar with its workings and its effect upon competition.

"That \$14,000,000 which THE CALL showed as having been paid by the overland railroads has been a dead loss of that amount to San Francisco, to say nothing of what it has lost in other ways by having the rates of transportation maintained on a high basis. It is really too bad, and I am glad to see THE CALL taking the matter up in the way it is doing. It is a matter that cannot be agitated too much. THE CALL is doing splendid service to the shippers of San Francisco."

Other merchants who were interviewed on the subject said that they had read THE CALL articles and were pleased with the array of facts set forth.

"Those figures the paper gave tell the story better than columns and columns of matter on the subject," said one man in the hardware business. "It was an eye-opener to note that so large an amount as \$14,000,000

had been spent in barring out competition and keeping down the growth of the city. Think what that amount would do for our streets, for our public buildings or for our parks?"

Of course the actual figures, representing the amounts paid by the railroads each year since 1877, are not accessible. They are closely guarded by the Pacific Mail people, as they are also by the railroad companies, but the following memorandum was handed to a CALL reporter yesterday by a person who has kept the general run of them. The memorandum reads as follows:

Year.	Amount
1877 (five months).....	\$550,000
1878.....	1,300,000
1879.....	1,250,000
1880.....	1,250,000
1881.....	1,200,000
1882.....	1,500,000
1883.....	1,300,000
1884.....	1,135,000
1885.....	880,000
1886.....	170,000
1887.....	900,000
1888.....	950,000
1889.....	950,000
1890.....	900,000
1891.....	910,000
1892 (two months).....	150,000
Total.....	\$15,045,000

These figures show a total that is \$490,000 greater than the total shown by the first figures given by THE CALL. It is difficult to arrive at the exact amount, but a railroad expert said yesterday that it was between \$14,000,000 and \$15,000,000, and he wanted to know how THE CALL had managed to hit it off so closely in the first computation.

"They keep those figures mighty dark," he assured the reporter.

All of the old contracts and agreements of the Transcontinental Association are supposed to be hidden out of sight in the archives of that very close combination, but the following paragraph from the original agreement with the Pacific Mail was unearthed yesterday:

It is agreed that the subsidy now paid the Pacific Mail Steamship Company for its steamers between San Francisco and New York State be borne by the several railroad companies here represented, in the proportions of their revenues from San Francisco business carried under this agreement.

This clause has been reaffirmed from time to time, and included in the later agreements made between the Transcontinental Association and the railroads.

It was, and is, incumbent upon the Chairman of the association to make up the amounts due the Mail Company under the subsidy arrangement monthly, and the Chairman of the association "shall immediately notify all parties of the amount of their proportions of the same, based on the last month's business of the railroads, for which accounts have been made and ren-

dered, and within thirty days from the date of notice."

An ex-railroad man who was interviewed on the subject said: "During the year 1884, when the Transcontinental Association paid the Pacific Mail \$95,000 a month, the amount guaranteed and paid over was greatly in excess of the value of the business to the overland lines. The steamship company knew well enough that it was making more money under this guaranty than it could under normal conditions. The same condition of things exists to-day. Now look at these figures, taken from the books of the Transcontinental Association



"What are you going to do about it?" from February to May, 1884, and you will see the point. These figures represent the actual earnings of the steamship company on business between this city and New York:

February.....	\$34,000
March.....	29,000
April.....	51,000
May.....	37,000

Total for four months.....\$151,000

Average per month.....\$37,750

"Now, you know under normal conditions the Pacific Mail would earn even less than \$37,750 a month in this business—I mean if there were competition with the railroads. But the railroads are now paying it \$75,000 or twice that amount to keep its hands off the overland traffic."

Under the interstate commerce law transportation companies are not permitted to charge a greater rate for a shorter than for a longer haul when the shorter haul is

included within the longer. If the Mail Company were in every way amenable to that law it would at once be hauled up short by the Interstate Commerce Commissioners. Its passenger and freight rates are in many instances higher to Central American ports from this city than they are to New York. The freight schedule is not available, but here are some of the passenger tariff figures:

Miles.	San Francisco to	Cabin.	Steerage.
1352...	Mazatlan.....	\$45 00	\$22 50
1476...	San Blas.....	50 00	25 00
1669...	Manzanillo.....	50 00	25 00
1836...	Acapulco.....	60 00	30 00
2053...	Port Angel.....	65 00	32 50
2138...	Salina Cruz.....	65 00	32 50
2219...	Tonala.....	65 00	32 50
2330...	San Benito.....	65 00	32 50
2348...	Ocosingo.....	75 00	37 50
2369...	Champerco.....	75 00	37 50
2443...	San Jose de Guatemala	75 00	37 50
2505...	Acapulco.....	75 00	37 50
2541...	La Libertad.....	75 00	37 50
2653...	La Union.....	75 00	37 50
2674...	Amapala.....	75 00	37 50
2741...	Corinto.....	80 00	40 00
2849...	San Juan del Sur.....	80 00	40 00
3013...	Punta Arenas.....	80 00	40 00
3473...	Panama.....	100 00	50 00
5970...	New York.....	90 00	40 00

It will be noted that the Pacific Mail Steamship Company carries and feeds a cabin passenger from this city to New York for \$10 less than he is carried and fed to Panama, although the distance to the former port is 2500 miles greater. It is the same with steerage rates.

It may be asked why does not a passenger for Panama buy a ticket to New York and save \$10? For the simple reason that if he stops off at Panama the company will refuse to turn over his baggage, declaring that it is checked to New York, and to New York it must go. If a gripsack is carried in the hand and no other baggage taken then the \$10 may be saved. This is only one of the many little tricks that are resorted to in the business.

C. P. Huntington rules the Pacific Mail as he also rules the Southern Pacific Company, and none of the patrons of either have had occasion to forget that important fact. The part of the subsidy paid by the Southern Pacific Company to the Pacific Mail is therefore the mere transfer of money from one pocket to another.

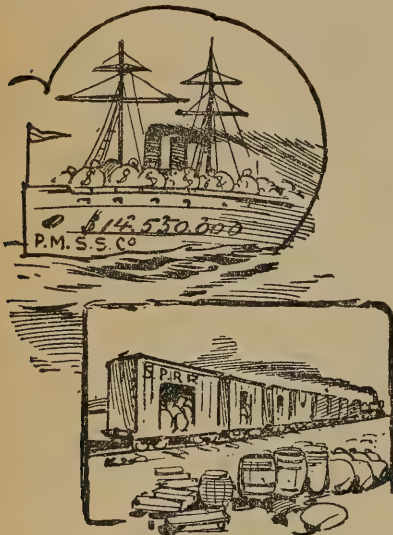
But the shippers do not like it, and they declare that they will not stand it.

THE SHIPPERS AROUSED.

March 10, 1892.

Nearly all of the independent merchants of this city are ready to sign the petition to Congress asking for the withholding of the Government subsidy from the Pacific Mail Steamship Company. This was ascertained by a general inquiry yesterday.

"We must do something," is the general remark, "to break up the combination between the railroads and the steamship company, and this is the best thing we can do at present. We will test Senator Felton's earnestness in the matter and will see what Congress is willing to do for us."



Transportation by Land and Sea.

President James B. Stetson of the Traffic Association was found full of the subject. He showed in a long conversation with THE CALL reporter that he had studied it up in nearly all its phases.

"I am fully satisfied that the petition will do much good. It may not be as efficacious on the start as some people may think, but

it will have the great result of putting the shippers of San Francisco and our representatives in Congress on record on the question. We will see where they all stand."

"Have you sent out any copies of the petition yet?" was asked.

"Not yet. You see, it will have to be gotten up in proper shape and sent out so that it can reach the merchants of all interior cities. I want to see how they all stand on this question. I have no doubt but that there will be plenty of signers."

"Are the local merchants much aroused on the subject?"

"Yes, indeed. They cannot get over the idea that by paying high freight rates to the railroad they are contributing a subsidy to the steamship company to throttle competition. I think all the members of the Traffic Association are willing to take this step. It can certainly do no harm and will, I think, result in a benefit to our State. We need to agitate such matters as this and to show our hostility to unfair combinations against our people."

Captain William L. Merry, the next man interviewed, was afraid that Congress might take no action on the petition. He has had much experience in that line, and says it is difficult for a petition to get any show in the House, though it may be treated with more deference in the Senate.

"It is all a question of how the thing is done," said he. "If it is introduced in a way that commands attention, it may not merely be thrown into the hands of a committee, but it may be read to the members of the whole House or Senate and wake some of them up."

Captain Merry did not seem to have any great faith in Senator Felton's show of earnestness in the matter of pushing his bill, which provides that no steamship company receiving a subsidy from the Government shall receive any pay, compensation or consideration whatever, to fix or alter or promote freight rates with any competing steam or railroad lines.

"Some persons tell me that Felton is an independent man and that he is ready to fight the railroads, but I am told by others that he is lacking in sincerity in this matter."

Whichever be the case I believe the petition will be worth trying."

Captain Merry, who is known to have some interest in the proposed Straits of Magellan steamship line, which has been projected by a number of local capitalists, was asked what had become of the project.

"Oh, it is not dead by any means," said he; "but I am not at liberty to tell what I know about the movements that are now being made. I will say this, though, that it is a plan that if taken up in the right way is bound to be successful. You see, it is hard to fight competition by sea when it is in a healthy state. You cannot make terms with it so easily either. If you start to build a local or overland competing line of railway, the first thing you know it will be in some combination with the other lines to keep up rates. But not so with a steamship line. That is hard to manage, unless you become a leading stockholder in it, which will, of course, give you control.

"The Magellan Straits steamship line could be made to bring the railroads to terms, I think, for unless they made rates to compete with it they would have to go out of the through westbound business. Of course I am a strong advocate of the Nicaragua Canal project, but before that shall have been put through and the canal have been opened we must adopt temporary expedients. The steamship line could be made to pay.

"As for a competing line of local railway that is a feasible plan, too, but we must not lose sight of the fact that to do much good the road would have to be an extensive system, and that there would be constant danger of its getting under the control of those most interested in shutting off its competition.

"No, this city could not build a railroad. The consolidation act bars it from doing anything of that kind. But it would not take such a great amount of money for the capitalists to build the line, and if it is to be built the work will be done at the instance of moneyed men here."

From another source it was learned that the project of establishing a competing line of steamers against the Pacific Mail and the railroad was well under way. Much money has been promised, and there is a report in circulation that the company will be incorporated before the end of the month. Should this be done some change in the attitude of the railroad toward the shippers may be expected.

"The railroad people think we are trying to bluff them," said a merchant who has been identified with the project. "We will show that we are in earnest. It will take time, of course, to accomplish what we have set out to do, but it is a feasible plan, and we can see our way clear to its fulfillment."

The members of the Traffic Association are now discussing the question of incorporating. The reason for this is that they desire their organization to be in a position to take a hand in such matters as making

contracts and entering into suits if necessary.

"Under the present conditions," said a leading member of the association yesterday, "the Traffic Association cannot transact business like a corporation. Suppose that the Straits of Magellan steamship scheme were to be in operation now, do you not think it would be possible for C. P. Huntington to get control of it, just as he did the Pacific Mail Steamship Company? Of course he could, if he went at it in the right way, and all that anybody else could do would be to sit by and see him run things to suit himself, which, of course, would mean the closing up of competition. But now, if the Traffic Association were incorporated, it could easily make an ironclad contract with the steamship company say for ten or twelve years, by which the carrier would be bound to keep clear of all combinations to maintain rates. Then if Mr. Huntington or any other man who happened to be at the head of railroad affairs should buy up every share of stock of the steamship company it would not help him in the least in the matter of controlling competition, for there would be the contract—a perfectly legal and binding arrangement—which he could not get around.

"The members of the Traffic Association see this, and they stand ready to incorporate. This will probably be done soon."

It pleased the merchants of this city very much to learn that the Pacific Mail Steamship Company had receded from its position with reference to not handling freight and passengers offered to it by the citizens of San Diego. The local shippers regard this as an effort to placate the public and they lay it to the agitation that has been commenced to induce the Government to withhold the subsidy now paid to the company for carrying the mails.

"The people of San Diego ought to be grateful to THE CALL for the attention it has given to the subject," said a shipper yesterday. "It has certainly done some good work. The Mail Company realizes the fact that it is in a very unpopular attitude toward the people. This subsidy matter has been stirred up before, but never in the way it has been done in this case. Formerly the shippers have said: 'Yes, that's good. Give it to them' Now they are going to work for themselves and something will be accomplished."

The petition will probably be ready for signatures next week. It will be well circulated, and care will be taken that none of the copies fall into the wrong hands.

Meantime the Mail Company continues to receive its \$75,000 a month for "space" in its steamers, which is at the command of the Transcontinental Association. And the shippers continue to pay their proportion of the subsidy. And the clipper-ship lines carefully maintain their rates to please the Transcontinental Association, and get full cargoes of T rails.

For the trail of the railroad is over it all.

OUTRAGEOUS FREIGHT CHARGES.

March 11, 1892.

Startling facts are being unearthed by the investigators into the Pacific Mail subsidy affair. The Traffic Association is now in possession of enough material to make out a very strong case against the steamship company if it should come to a question of law, which it may do in the course of time.

"We have had the opinions of some of the best legal minds on this Coast," said a member of the association yesterday, "and we have been urged to take the matter into the courts. It has been shown conclusively to us that the common law has been violated, to say nothing of the evaded provisions of the interstate commerce law, for which the railroads are now showing the utmost contempt. We can show that contracts made in violation of the law and against public policy have been entered into, and we could make a fine showing when it came to the matter of presenting our proofs. THE CALL knows what the proofs are and so do its readers, or at least they know on what we might base a case, and the shippers are willing to testify, that is, those who do not receive concessions from the Pacific Mail Steamship Company or from the railroads."

A CALL reporter went about among the leading coffee-shippers and others who are interested in bringing Central American products to this city. Here is a summary of the principal facts which he elicited. It shows at a glance what the Mail Company is doing to advance San Francisco's interests as the leading commercial center of the Pacific Coast, and make of it a great distributing point for goods from Mexico and Central America:

Rate of freight per ton on coffee bags from Calcutta to San Francisco, distance 20,000 miles.....	\$12 50
Rate of freight on the same bags from San Francisco to Champerico, Guatemala, by Pacific Mail, distance only 2400 miles.....	12 50
Rate of freight on shipment of coffee from Champerico to San Francisco, by Pacific Mail, distance 2400 miles.....	4 00
Rate of freight on another shipment of coffee from Ocos to San Francisco, on same steamer and to same shipper, distance 2370 miles.....	5 00

Rate of freight on still another shipment of coffee from San Benito to San Francisco, on same steamer and to same shipper, distance 2350 miles.....	15 00
Regular rate of coffee freight per pound by the Kosmos steamer line from Central American ports to London, Bremen and Hamburg, distance about 12,000 miles.....	3-5c
Regular rate of coffee freight per pound by the Pacific Mail from Central American ports to San Francisco, distance varying from 2400 to 3400 miles.....	5c

If carefully read this summary tells quite a story. San Francisco's interest in the matter is not so much in the fact that the Pacific Mail is going along quietly and raking in a subsidy of \$300,000 to \$500,000 from the Government and another of from \$900,000 to \$1,000,000 from the railroads every year, but that in taking these subsidies the Mail Company is showing a profound indifference for the fate of our mercantile trade. It may readily be seen that if these high rates are maintained and this discrimination shown, San Francisco is getting left out in the cold.

"On the Atlantic side," said a big coffee-shipper yesterday, "the Mail Company favors everybody that it can stand in with and get freight from for its Central American ports. On the Pacific side it has a few favorites, and after these have been cared for the company does not care what becomes of the rest.

"San Francisco ought to control the entire field west of Chicago in the trade in Central American products and particularly coffee. As a matter of fact it controls a very small field, and that is confined to the territory immediately surrounding it. We ought to be able to sell coffee in Omaha, St. Paul, Minneapolis, St. Louis, Indianapolis, Chicago and many other cities to which we now send only an occasional shipment, and then rarely at a good profit. That trade belongs to us by virtue of our geographical position, and the Mail Company and the railroads ought to be made to give it to us, either through process of law or any other way that is feasible.

"The whole trend of affairs in connection with the Pacific Mail is to belittle San Francisco and make her subordinate to other cities in respect to trade of this kind."

Now as to the summary. It is shown in the first place that the rate of freight on

coffee bags from Calcutta to San Francisco is \$12 50 a ton, while the distance is 20,000 miles. On the same bags the rate from San Francisco to Central America, by the Pacific Mail, is \$12 50, or exactly the same for less than one-eighth of the former distance. This is a great discouragement to the San Francisco shipper, at the outset, as he sees at once that the Mail Company is discrim-

charges almost as much for the packages in which the coffee must come to this port as it does for the shipment of coffee here, the regular rate being \$12 to \$15 a ton.

As for the matter of discrimination in rates on the same steamer, a coffee-shipper said:

"The Mail Company brings to this port cargoes of coffee to different shippers from



THE MORE SUBSIDY THE LESS FREIGHT.

Uncle Sam—I give you this money, Collis, to encourage you in extending our trade and advancing the interests of all the people.

C. F. H.—Thank you, Uncle, I will do the best I can—(aside) for myself.

inating against him. It must be so, or the rate of freight on the bags would be much lower. If the Mail Company cared to have San Francisco merchants bring bags here, send them to Central America and ship coffee in them to this port for distribution broadcast throughout the country, it would put the rate of freight on those bags down to a reasonable figure. As it now stands, it

the same points, and some of the men who receive it are charged one rate of freight and some another. It is very queer, is it not, to get three shipments from the same steamer from points along the Central American and Mexican coast and have the rates vary so as to give the farthest point the cheapest rate and the nearest the highest. That was my experience not long ago.

I had one shipment loaded at Champerico for this city at the exceptionally low rate of \$4 a ton, this exception being due to a little opposition which the company had met in the transportation business from that port. When the steamer came up the coast to Ocos I had another shipment in waiting there, which was taken on at a special rate of \$5, although the port was nearer to San Francisco than was Champerico. This was a surprising sort of thing in itself, but the worst is yet to come. The steamer reached San Benito and there took on another shipment of coffee for our firm. San Benito is still nearer to San Francisco, but the rate was still higher, it being fixed by the company at \$15 a ton. This, you see, was three times the rate from Ocos, which was farther away from San Francisco, and was nearly four times as much as we had to pay for the same kind of freightage from Champerico, which was the farthest away of any of the three points. At this rate, had we had any coffee to ship from Manzanillo, which is 700 miles nearer than Champerico, we would have had to have paid over \$200 a ton to get our coffee to San Francisco.

"This is an example of Pacific Mail methods of doing business. I, for one, don't like it, and I want to see the Government take away that subsidy of theirs. While they are doing business in this way they are certainly not deserving of the slightest consideration from the Government or from the people.

"There are parts of the route along the coast where the Mail Company charge passengers \$25 a night. On the regular runs between Manzanillo and Panama the rate charged is about \$10 a day, which is simply extortionate, considering the poor food set out and the class of accommodations furnished.

"That every other part of the world is faring better than San Francisco in the question of coffee freights may be easily shown. It costs only 3-5 of a cent to ship coffee from Central American ports to Europe by the steamers that run through the Straits of Magellan, although the distance is about 12,000 miles. Now, although the distance to San Francisco averages less than 3000 miles we have to pay a regular freight tariff of $\frac{1}{2}$ of a cent a pound. Is not that enough to make a free American trader feel sick? I confess that I do."

A Battery-street patron of the Pacific Mail complained bitterly of his treatment by the transportation company.

"I have done my level best to build up a good trade in Central American products," said he, "and it seems to me that that concern has tried every way in its power to discourage me. It has certain merchants here which it favors. There are about six such firms in the Central American trade—I could name them all if I cared—which enjoy concessions from the Mail Company. The others must take what they can get when it comes to a question of rates, and they have to be satisfied, for no amount of

persuasion will make the company see that one man is entitled to just as good rates as another. It pays the company to have these favored firms stand by it when there is trouble at hand, and I see that they are all trying to discourage the movement against the Mail Company at present. Of course, it is to their interest to do this, though they certainly must see that it is to the greater interest of San Francisco to have her avenues of commerce open to all alike.

"How do I know that these firms get concessions? Why, I have the proof in black and white from the Mail Company's agents themselves. They once wrote me a letter, in reply to a request of mine that I should be given the same rates that were furnished to one of the favored firms. In that letter it is plainly stated that they are in the habit of making concessions to certain individuals, and they gave the reasons why they would not do so in my case. These were that I wanted to introduce competition and destroy the trade of some of the other firms to which they were giving concessions.

"In this way the steamship monopoly helps the monopoly of the business by others. It virtually forces the correspondents of San Francisco firms in Central America to trade only with those who are in the little ring with the Mail Company.

"There is a regular printed tariff of freight rates for all shippers to and from Central American ports. The tariff is for the use of the general public.

"There is another tariff, or a sort of schedule, which makes much lower rates on all classes of freight. That tariff is for the use of persons in the ring, who are fattening off from the favor shown by the transportation company.

"The result of this is very far-reaching. It benefits nobody in the coffee trade here, except the ringsters themselves, while it does not result in cheap coffee for the consumer. A man goes to one of these people in the favored circle and asks for the prices of coffee. He is told that the price for this is so much and the price for that is so much, and there is no material difference between the rates he gets from them than from others, and yet the chances are there is a little shade of difference, too, and this is enough to cause the sale to be made. But when the buyer wants to know why prices are kept up so high, he is told, 'Oh, it is because of high freight rates. Just look at this tariff, and you will see that it costs so much to lay these goods down here.' As a matter of fact, the man selling the goods never uses that tariff at all. He has another hidden away that he never shows to the buyers of his goods. He would not dare to, for if the Mail Company found that he was handing it about, it would take it away from him."

President Stetson of the Traffic Association has written a letter to Senator Felton with regard to the proposed petition which the merchants want to circulate and sign, asking Congress to empower the Postmas-

ter-General to withdraw the subsidy paid by the Government to the Pacific Mail. Whether Mr. Felton favors the move or not, it will be made, but it is desired to have him consulted, so that it will be seen that the merchants wish to take hold of the matter with him in a friendly spirit.

The desire is now a general one among the merchants that the subsidy shall be withdrawn. Of a large number that have talked with Mr. Stetson on the subject nearly all are in favor of sending out the petition.

If the Traffic Association had not so many irons in the fire, and was not trying to first settle the question of local railroad rates, it would bend all its energies on the Pacific Mail subsidy affair, but Traffic Manager Leeds has his hands full and will have to pay particular attention to one thing at a time in order to accomplish the results which he has set out to secure for the merchants of this city.

President Stetson, however, feels that the Mail subsidy matter is something which demands immediate attention, and he is devoting much of his time to a consideration of that problem. He says he will have the Government subsidy off the Pacific Mail shelf if he can get sufficient support in this city to carry the measure through, as he proposes. There have been several important conferences of late among the members of the Traffic Association for the purpose of considering the matter, and when the petition goes it will be seen at once to be one on which much care and attention has been bestowed.

"We will break up that unholy combination between the steamship company and the railroads," says Mr. Stetson, "if it takes our mightiest effort. We do not so much depend upon this petition. There are other means at our disposal."

COFFEE-RATE DISCRIMINATION.

March 13, 1892.

THESE FIGURES TELL THEIR OWN STORY.

The rates on coffee per 100 pounds are:

Rio de Janeiro to Chicago via New York.....	.50
San Jose de Guatemala to Chicago via San Francisco.....	\$1.42½
Rio de Janeiro to Denver via New York.....	1.25
San Jose de Guatemala to Denver via San Francisco.....	1.92½

"How can we best run things to retard the progress of San Francisco?"

"How can we interfere with the regular and legitimate workings of commerce so as to keep down the trade of the Pacific Coast?"

"How can we give the least service for the most money?"

Supremely satisfactory to itself is the way the railroad combination is answering these questions.

Supremely disgusting to the shippers of this Coast is the result.

THE CALL's investigation yesterday took a turn toward coffee. It was ascertained without much trouble why San Francisco is finding it uphill work to get into the mid-continental territory with Central American coffee.

It was also ascertained why we cannot sell more of our manufactures and agricultural products in Mexico and Central America.

The key to the whole question is rates of transportation. They are abnormally high.

Why are they high? Because the Pacific Mail and the Transcontinental Association make them so.

NOW AS TO COFFEE.

RATES ARE ALL AGAINST THE LOCAL DEALERS.

"Brazil," said a big coffee-dealer yesterday, "can ship her coffee to New York and

on to Chicago, St. Louis, Omaha and even as far west as Denver and Santa Fe at one-half the freight rates charged by the steam and rail monopoly which runs the business between Guatemala and the Eastern cities via San Francisco."

The merchant took out his pencil and pad and jotted down these figures:

	Rates per 100 pounds.
Rio de Janeiro to Chicago via New York	.50
San Jose de Guatemala to Chicago via San Francisco.....	\$1.42½
Rio de Janeiro to Denver via New York	1.25
San Jose de Guatemala to Denver via San Francisco.....	1.92½

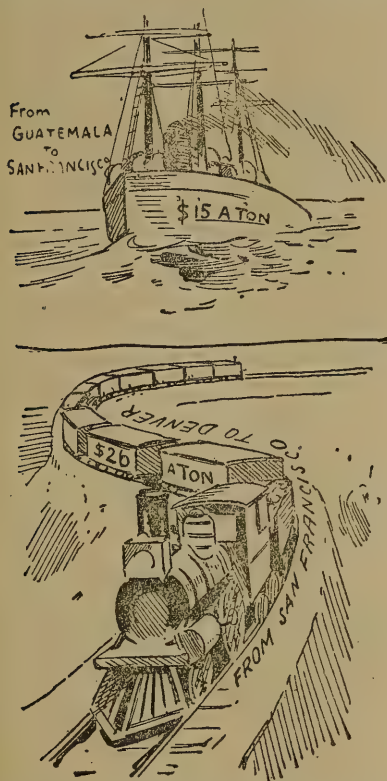
"That shows plainly enough where San Francisco stands as a great distributing center for Central American coffee. How do you like the picture?"

"Ought San Francisco to control the Colorado and New Mexico coffee trade under usual conditions?"

"Why, we ought to have four times the trade there that we have. We were better off in this respect six years ago than we are now. We used to be able to sell Central American coffee in New Mexico. Now we don't sell any there. Denver, which, as you can see by the map, is right at our doors, is as far away from us in the way of trade as if she were located in Europe. We sell very little coffee there—hardly a carload a year.

"When you consider the fact that the distance around by New York from Rio de Janeiro to Denver is nearly twice as great as it is from Guatemala to Denver via San Francisco, we surely ought to have at least equal rates on coffee. But here, you note, the rate is more than three times as much to Denver via San Francisco than it is from Rio to Denver via New York. The steamship lines hauling the Brazilian coffee are content to charge low rates and get a large business, but the Pacific Mail, working under big subsidies from the Government and the railroads, does not seem to care to increase its freightage, and goes on year in and year out on the same old basis. Its regular rates on coffee from Guatemala

to San Francisco are 62½ cents a hundred pounds. When you add this to the high railroad rate of \$1.30 to Denver you see it runs the rate up to \$1.92½, which is simply prohibitory. Strange to say, while the rail rate from this city to Denver on any grade of coffee is \$1.30, to Chicago it is only 80 cents. This looks as if an attempt was made to shut us out of the business in the intermountain region, which properly belongs to us, and to give it over to the New York dealers."



Another large coffee-dealer called attention to the fact that while the rate from San Francisco to Denver was \$1.30 a hundred pounds on Central American coffee, the rate from New York to San Francisco on the highest grades of Mocha and Java coffee was only \$1.35. The Rio de Janeiro coffee pays the same rate, for under the railroad tariff coffee is coffee no matter what the quality. This shows a discrimination in favor of New York dealers right in our own home market.

"San Francisco ought to sell Central American coffee all over the Western States. Our trade ought to be increased

from year to year instead of being decreased, as it is. I tell you, this Pacific Mail and railroad combination is more injurious to San Francisco's interests than a great conflagration could be. We could rebuild the town, but it would be mighty hard to rebuild lost trade, under the conditions that now rule us. During the flurry in rates six years ago, when the railroads were fighting each other, the coffee trade of this city was nearly quadrupled, but as soon as rates were restored, the business quieted down to a surprising extent, and has remained in a feeble state ever since.

"I don't maintain that railroad rates should be cut down as low as they were then, but if they were twice as high as during the flurry, and the Pacific Mail would stand in with us and favor San Francisco a little instead of favoring all the rest of creation and charging us the top-notch rates, we could make our trade double what it is in less than six months. I am not talking for effect, but I am stating facts.

"Now as for Brazilian coffee. It is cheap stuff alongside of the Guatemalan article, and it naturally sells well among people who want a cheap article, but it is rated no lower from New York to San Francisco than are other coffees, nor any lower when shipped from San Francisco to New York. On this article of freight the rates are always the same, whether the coffee is high priced or not. That is well enough. We naturally make no complaint. What we complain of is that the rates charged by the Pacific Mail and the railroads on coffee from Central America via San Francisco to the Colorado and Mississippi rivers and Great Lake territory are greatly in excess of the rates that our competitors have to pay. We want to know why this should be so? Why should San Francisco be so badly treated by the transportation companies?"

CAN THEY BREAK IT?

THE LOCAL SHIPPERS AND THE PANAMA COMBINE.

The Traffic Association's manager, J. S. Leeds, receives a great many suggestions in the course of a day. Some of them are good, some bad and some indifferent. Yesterday a heavy freight-shipper went to Mr. Leeds and laid before him a plan, which may be adopted, as many members of the association favor it.

"What will do us the most good in connection with this fight of ours against the Pacific Mail Steamship Company," he said, "is to break up the compact which exists between that corporation and the Panama Railway Company. That compact is so arranged that the Panama Railroad is virtually a member of the Transcontinental Association. The Panama line makes its rates to suit the Mail Company, and will not let any other steamship or even a sailing vessel ship freight over its road in competition

with the Pacific Mail. Now, the Panama Railroad is controlled by French capital, and it is certainly in a position to be independent if it cares to be. Let the Traffic Association send a man to France to represent the condition of affairs, and make terms with the Panama Railroad Company. We can surely offer the company some inducements. At present it has no adequate knowledge of our local shippers' combination, or of its strength and the terms which it may be prepared to make. We might induce it to help us. We can get no assistance from the American transportation corporations. Let us try foreigners."

Captain W. L. Merry has no great faith in anybody's ability to break up the Panama Railroad Company's combination with the Pacific Mail, but he thinks there is no harm in trying.

"If there is any way of overcoming the Pacific Mail's discrimination against this part of the country," said he, "it ought to be given a trial. All freight coming from any port in the United States is charged high rates over the Panama line. If it comes from foreign ports the charge is much lower. This is the result of combination. It is strange that an American company should combine with a railroad across the isthmus against American interests, but it is a fact, nevertheless. From New York to San Francisco the rates via the Panama Railway are made high for the sake of helping the railroads. From England to San Francisco the rates are made low.

"It is a flat discrimination against American interests all around."

THAT SPACE RENTAL.

A VERY FAT THING FOR THE MAIL COMPANY.

The railroads value the competition of the Pacific Mail Steamship Company very highly. The space rental of \$75,000 which they pay to the steamship concern is at the rate of \$31.50 a ton. Now for its general run of freight the Mail Company does not receive anything like that amount per ton. It would never charge half that sum if competition were on a normal and legitimate basis. The highest rates charged by the Pacific Mail are for its Central American service, and the regular schedule of rates shows figures that run away below \$31.50. Fifteen to twenty dollars is about the rate it gets on the average shipment.

It is a curious instance of the way a little weight will swing its balance—this matter of the Pacific Mail space rental. It does not really cost the railroad people anywhere near \$75,000 a month to keep control of the Pacific Mail's competition. The real cost is about \$40,000, for the space is worth to the railroads whatever the shippers will pay for it, and when it comes to adjusting the subsidy matter the railroad only pays the steamship company a little over \$48,000 a month, or about \$500,000 a year. Sometimes the space is occupied, sometimes it is not. It is all the same to the Pacific Mail.

The Mail Company's agents here claim they know nothing about any railroad subsidy, but the merchants know. Traffic Manager Leeds knows. He was Chairman of the Transcontinental Association not so very long ago, and he is the man who made the latest contract with the Pacific Mail Company.

Here are some straws which show how the wind blows:

A shipper who called at the freight office of the Pacific Mail Steamship Company yesterday and asked for a tariff sheet of freight rates to Eastern ports was told that there was no such thing in existence.

"We don't have any regularly printed rates," said the man behind the desk.

"Do you have regular rates?"

"Oh, yes; but they are not given out to everybody. What kind of freight have you? Where is it? To what point do you want it shipped?"

These questions were fired at the merchant all at once in a single breath. The latter gentleman declined to be catechised in this manner. He reiterated his request for a freight tariff to Eastern parts, and being again refused left the office to seek his information elsewhere.

"I wanted to make a big shipment of madder from Constantinople to San Francisco," said a drug-dealer yesterday. "I found that prices were low enough and the rates as far as Hong-Kong were very fair, but you can judge of my disappointment when I received the following letter from the freight manager of the Peninsular and Oriental Steamship Company:

"We can handle your madder at the low rates I have named, but you cannot get it to San Francisco. The Pacific Mail's rates are simply prohibitory."

And the Government goes on paying a big subsidy to the Pacific Mail to encourage American commerce and benefit American shippers.

SAN FRANCISCO'S LOST TEA TRADE.

March 16, 1892.

Shabby, very shabby, is the treatment of San Francisco by the Pacific Mail Steamship Company and the railroads in the Trans-continental Association.

Everybody knows that San Francisco's tea trade ought to amount to millions of packages a year. And so it would if it were aided in the least way by the transportation companies.

	Packages.
Tea imports of San Francisco for the year 1891.....	154,353
Tea imports of San Francisco for the year 1886.....	170,696

How about that?

What is the cause of it?

"Railroad and steamship discrimination against us," respond all the tea merchants.

They are right. THE CALL has looked into the matter very carefully, and the result of its investigation is given in what follows. Here is the key to the whole question: Heavily subsidized by the railroads—\$1,000,000 a year—and by the Government—\$300,000 to \$500,000 a year—the Pacific Mail smiles at competition and looks placidly on while roundabout lines of transportation take away its freight traffic.

"Let it go," say they; "we're making money enough out of our subsidies."

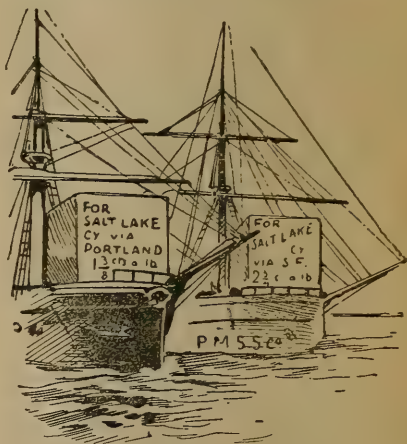
To this apathetic attitude San Francisco owes her loss of trade in tea, as well as in many other things. Look at these figures:

Rate on tea per pound from Yokohama to Salt Lake City, via San Francisco..	23¼c
Rate on tea per pound from Yokohama to Salt Lake City, via Portland, Oregon.....	11½c

Is it any wonder that our merchants make complaint?

"Our trade is slipping away from us," they cry. "What are we going to do?"

If it were only the tea men who are interested in this question of discrimination by



Why San Francisco cannot handle tea for mid-continental points.

the transportation companies, there need be no great to-do about this question. But the discrimination affects all lines of business, even to real estate.

Leeds and Steison of the Traffic Association say they can remedy the evil, and that they are hard at work now. But they want the support of the entire community.

Will they get it?

TEA MEN AROUSED.

A Loud Cry Against Railroad and Steamship Discrimination.

"Yokohama sends us most of our tea," said a leading tea merchant yesterday. "We used to ship Japan teas into the mid-continental territory in very large quantities. We supplied Denver, Salt Lake, Omaha, St. Louis, St. Paul, Minneapolis, Chicago, Indianapolis, Louisville, Cincinnati, Cleveland, Detroit, Toledo, Pittsburg, and, in fact, the whole country, sending many carloads to the Atlantic seaboard. To-day we are obliged to be content with what trade we can secure in the territory lying immediately about us."

"What is the reason for this?" asked THE CALL man.

"Why, the transportation rates by steamship and rail are all against us. The Portland tea-importers can bring tea into their city at minimum rates, while we are charged the maximum. We cannot have our tea hauled to any point in Utah or Colorado at less than $2\frac{1}{4}$ cents for the whole haul from Yokohama, while the Portland merchants pay only 1 to $1\frac{1}{2}$ cents.

"The Pacific Mail people say they cannot haul tea at such low rates as are quoted by their competitors. The reason why they say this is because they are not particularly anxious for the business. They get their big subsidies from the Government and from the Transcontinental Association, and they are content to sit down and see the lines running via Portland and Vancouver take trade away from San Francisco."

The tea man went on to say that he thought the San Francisco merchants had a bigger grievance against the Pacific Mail and the railroads than they had against any other elements that are opposing them at present.

"What does the Government pay them a subsidy for? Why, to encourage commerce. And here they go and make rates dead against San Francisco. I tell you that we merchants of San Francisco ought not to discontinue this agitation until that subsidy has been removed and the Pacific Mail is forced into regular competition with the other Pacific Ocean carriers.

"One of the leading firms in the tea business here has given up the idea of getting any satisfactory rates from the Pacific Mail and has been chartering sailing vessels.

Thus far this experiment has been successful, but of course there is a great loss in time. It takes from twenty-five to forty days to run a sailing vessel in here from Yokohama laden with tea, while by the Pacific Mail steamers the time is only fourteen days. Men in the tea trade have to be lively with their importations. In sleepy old Japan railroad facilities have been greatly improved of late years, and the growers there can land their tea at Yokohama and have it ready to put aboard the steamers in much less time than formerly. But the more the Japanese railroad facilities improve the worse it is for San Francisco in the tea business, for our railroad facilities are not showing any improvement and the Portland competitor can get hold of all the tea he wants and distribute it all over the Coast and as far East as Chicago, while we are hammering away at the railroads and Mail Company for better rates."

The informant thought that the shoe ought to be on the other foot. The railroads and the Pacific Mail have made so much money out of San Francisco that they ought, as a matter of conscience, to stand by her now and aid her in the fight.

THE CALL man hunted up some figures showing tea importations. They do not look very nice, but they will show those who need education on the subject how the Mail Company has let its trade slip away from it to the detriment of San Francisco.

<i>Year.</i>	<i>Packages.</i>
1886	170,697
1887	141,214
1888	145,220
1889	149,966
1890	120,801

Of a dozen merchants who were seen by CALL reporters yesterday, everyone agreed that San Francisco's tea trade ought to be ten times what it is.

Not another city in America is more favorably situated for the handling of tea.

Not another city in America is more harshly discriminated against by the railroads and by the steamship lines.

PORTLAND'S ADVANTAGE.

The Rates Are Greatly in Favor of the Northern City.

"By long odds Portland is the best distributing point on the Pacific seaboard for Oriental imports, and especially so for tea."

The speaker was F. A. Wheeler, one of the largest tea-dealers on the coast. The sentiment expressed, however, voices the opinions of fully a score of large importers of Oriental goods who were interviewed yesterday.

"A great deal of the tea I am now handling is brought down here from Portland, after making the trip from Yokohama by one of the Union Pacific's steamer. Our firm represents the largest teahouse in Japan, and were the conditions favorable we could do a splendid business right here in San Francisco. As it is now the only profit there is in handling tea is when it is received at and distributed from Portland. That is the truth of the matter, and when that has been said all that can be has been said."

At this point Mr. Wheeler declined to talk further on the subject. He didn't dare to talk about it, he said, for when he got started his feelings got the better of him and he never knew when to stop.

"But the readers of THE CALL are interested in the matter, Mr. Wheeler, and there is every probability that the more publicity the thing has the sooner will public opinion be strong enough to find a way to mend the wrong."

Thus appealed to, Mr. Wheeler could not but give way to the feelings that were all but consuming him.

"Why, sir," he said, "it's a fearful outrage. San Francisco is being despoiled in a wholesale way by the rapacity of these two monopolies, the Pacific Mail Steamship Company and the Southern Pacific Railroad. We must be a race of slaves to have stood it patiently so long. We are not losing the Oriental trade. Don't make that mistake. We have already lost it. It's gone from us and can never be regained till this discrimination is put a stop to by some means. I think THE CALL is going at it in the right way. If all the other papers would but do the same, we'd soon find a way out of the woods. That cartoon in THE CALL last Sunday represents things just exactly as they are. That picture has been the talk of the street."

"Particulars? Yes, you want some particulars. Well, let me tell you how Portland has captured the tea trade. The Pacific Mail steamers demand \$10 a ton for carrying tea from Japan. That is equal to about 1½ cents a pound, for there are only about 890 pounds of tea in a ton. It is shipped by measurement, you know, forty cubic feet being considered a ton. When the tea is packed in large boxes that measurement is pretty nearly right, but most of the tea we get comes in small packages and the wood in the boxes eats up the weight. Put the average down at 1¼ cents a pound from Yokohama. That is fair. Now from San Francisco to Ogden, Omaha or Kansas City, or any of the Eastern distributing points the railroad charges \$1.55 per 100 pounds in carload lots. That brings the freight bill up to \$2.80, say \$2.75 per ton."

"Now what do you suppose the Portland importer pays to land his tea at Ogden? Without previous knowledge of the subject you could never guess. One and three-eighths cents a pound is the total cost

of bringing tea from Yokohama to Ogden. Now do you see why Portland is doing all the tea business? Figure it out in this style," and Mr. Wheeler put his feelings, which were really too deep for words, on paper, with this result:

One pound tea from Japan to the Missouri River via San Francisco.....2¾c

One pound tea from Japan to the Missouri River via Portland.....1½c

The difference,.....1½c

"That difference of 1½ cents a pound is what makes it profitable to the Portland merchants to import tea and unprofitable for the San Francisco merchants."

"But that isn't all. By the northern route the importer can lay his tea down in New York City cheaper than the San Francisco merchant can get his to Ogden. From Yokohama to New York via Portland the rate is from 1½ to 2 cents a pound, or from three-quarters to one-half a cent less than the rate from Yokohama to Ogden via San Francisco."

"Does the fault lie with the steamship company or with the railroad?"

"With both. They work hand in hand to rob the people of California and ruin her commerce. If an organization were to be formed for the sole purpose of ruining San Francisco as a seaport its promoters would have to think long and deep to devise a better method than the one now directed against us by the steamship company and the railroad. The geographical situation of San Francisco should alone make this port the distributing point for all merchandise from China and Japan. The steamship company alone could not make San Francisco play second fiddle to Portland, but with the aid of the railroad they have their death's hand on our harbor."

"No; we don't need a competing line of steamers from the Orient as badly as we do a competing railroad. We could and would put on 'sailers' to bring our freight from China and Japan, if that would avail anything. In fact, we have done that already in several instances, but the railroad's capacious maw swallowed up all the profits. You see, the railroad's rate from here to Ogden is greater than the northern rate from Yokohama to New York. Of course the steamship line kicked a good deal when we brought the tea over by sail and refused us a rebate on other commodities. We must let them do all our business or none. Well, it wouldn't kill us to accept the alternative. Besides, we could do as we do a great deal now—have the tea brought over on the Upton steamers to Portland and then bring it down here on coasters. Rather a roundabout way, isn't it; but the saving is considerable."

"Still, as I say, the railroad is leagued with the steamship company, and save as we may or might on the ocean freight, the overland charges make it impossible for us to compete with Portland."

"Why are rates so much cheaper by way of Portland?"

"Competition, competition. There are three steamship lines from the Orient to Portland and Victoria. Perhaps it would be better to put it this way: There are four overland routes and each has its connecting line of steamers. The overland routes are the Northern Pacific, the Canadian Pacific, the Union Pacific or the Short Line. The Union Pacific has a steamer service, known as the Upton line, comprising the Sussex, Zambesia and Batavia."

"Have there been any big consignments of tea lately?"

"By way of San Francisco? No, there have not, but I can tell you of a San Francisco merchant who is handling in Portland, mind you, 9000 packages of tea from Yokohama that just arrived by the Upton line."

Mr. Wheeler is personally and pecuniarily interested in this freight discrimination matter and feels strongly on the matter. Unless things are bettered in some way he declares he will either have to go out of business or remove to Portland.

"Give me one cent a pound profit on tea," he says, "and I will bring the whole product of Japan to this port."

Perhaps one cent a pound may seem to be a large profit for the importer. Yet it is not quite the sum of the difference in freight rates between San Francisco and Portland. Doubtless Mr. Wheeler and most other tea-importers in this city would be satisfied with a much smaller profit on tea than one cent a pound, but at present, in order to compete with the northern importers, the San Francisco merchant handles tea as the retail grocer once handled sugar, merely as an accommodation to for his customers.

THE SUEZ CANAL.

How Much of the Tea Reaches New York from Yokohama.

Another well-known tea importer in this city who was interviewed yesterday by a reporter for THE CALL presented an interesting phase of the case that is seldom considered. That is the facilities for cheap freight rates afforded by the Suez Canal.

"Do you know," said he, "that tea is being brought through the Suez Canal to the Atlantic seaboard, and from there shipped west of the Rocky Mountains? You would hardly believe that, but it is a fact. Tea may be laid down in Kansas City, even at Ogden, via New York, cheaper, or at least as cheaply as from San Francisco."

"We find it impossible to keep up any respectable connection with New York in the tea business, though Portland importers are shipping tea to the Atlantic coast every day of the week. But, of course, Portland does not handle all the tea, and you would be surprised to learn what large shipments are now being made from Yokohama to New York via the Suez Canal."

Referring to a printed list of recent tea shipments to the United States and Canada the importer pointed out to THE CALL man that about one out of every ten vessels loading at Yokohama was bound for New York via Suez. The same list also showed that for every consignment of tea loading for San Francisco there were half a dozen consignments for Portland.

"Why should Portland have all this trade?" said the importer. "San Francisco had it all before Portland was ever heard of. It belongs to us by the divine gift of nature. Every pound of it should come to this port and would come were it not for the overland freight discriminations. If I thought there was no hope for the future I would move to Portland to-morrow."

It is well known on the streets that a syndicate of Chicago capitalists has had its agents out here for the past week looking over the ground and examining into the advisability of establishing a tea importing house in this city. It is well known also that the agents have looked over the ground thoroughly, have examined the questions of rent, freight rates, shipping facilities and every other point that careful agents should examine. And THE CALL is not betraying a secret when it states that these conscientious agents have written to the gentlemen interested in the enterprise advising them to locate at Portland rather than San Francisco.

THEY APPRECIATE IT.

What the Merchants Think of The Call's Recent Service to Them.

"THE CALL has been doing excellent service for the business men of this city," said a California-street merchant yesterday. "I am of the opinion that the thanks of the entire business community are due THE CALL for its splendid work in exposing the devious methods employed by the Pacific Mail Steamship Company and the Southern Pacific Railroad in stifling competition and retarding the growth of this city. Heretofore the public has manifested a strange apathy regarding the operations of these twin freebooters, but I am convinced that the lack of interest in this matter has been due to their ignorance of the subject, and that their ignorance has been as dense as their apathy. Since THE CALL began its expose of the Pacific Mail methods public interest has been aroused to a high pitch, and I predict that some lasting good is bound to come of it all."

"Best of all THE CALL has supported Leeds and Stetson in their fight against the railroad and steamship company and has directed public attention to the manner in which the city is being despoiled on all hands by these monopolies, and for this it deserves the thanks and earnest co-operation of all who have the interests of San Francisco at heart. Personally, I consider

THE CALL's expose of the \$14,555,000 subsidy paid by the railroad to the steamship line one of the best pieces of newspaper work done in this city for a long while. It will have a far-reaching effect, or I am very much mistaken, and go a long way toward hastening the day when San Francisco will throw off the yoke that grinds her to the dust.

"I hope THE CALL will keep up the good work. Both Leeds and Stetson need every assistance possible. They are strong fighters and men who will never give up the battle till complete victory is theirs, but they are almost single-handed. THE CALL is a power in the land and will be able to rally the people to the great conflict.

"Business men are well pleased with its present attitude, and to-day there is a more hopeful outlook for the speedy redress of our grievances than ever before. I only wish there were more papers like THE CALL in this city. There would be fewer evils, and San Francisco would not now be under the Southern Pacific yoke."

THE PANAMA RAILROAD.

The Southern Pacific Negotiating for Its Control.

A statement comes from New York to the effect that upon the expiration of the present contract between the Pacific Mail Steamship Company and the Panama Railroad Company the former will be asked to renew the contract for a term of years at an increased rate, and that in case the steamship company should refuse these terms the Panama Railroad will organize a competing line of steamers.

In less than a year this contract will expire. According to its terms the steamship company pays \$55,000 a month to the railroad company for the transportation of its passengers across the isthmus. Previously the steamship company paid \$75,000 a month for this service, and it is to this latter figure that, according to the New York advices, the Pacific Mail will be asked to agree.

When a New York reporter put this view of the matter before the officials of the Pacific Mail Steamship Company, they, of course, straightway laid claim not only to the whole of the earth, but to most of the waters thereon. Vice-President J. B. Houston is quoted as having said that the Pacific Mail had a perpetual right to the exclusive use of the waters of the Pacific Ocean between San Francisco and Panama, and that no other line of steamers could be put on unless they paid a forfeit of \$10,000 a steamer to the proprietors of the whole world and most of the sea.

But all this braggadocio on the part of Mr. Houston seems to have been a little too previous. He evidently overlooked the existence of the Southern Pacific Company, and seems to have forgotten the fact that they are the real owners of the universe, including both land and sea.

It now transpires that the latter company has been secretly negotiating with the owners of the Panama Railroad with a view of controlling that line as soon as the present contract expires. Report has it, too, that the Southern Pacific has been successful in these negotiations, and that upon the expiration of the agreement with the Pacific Mail the Panama road will be part and parcel of the Southern Pacific system.

HIGH RATES FOR SHORT HAULS.

March 19, 1892.

PACIFIC MAIL FREIGHT TARIFF AND RATES OF OTHER LINES MERCHANDISE FROM SAN FRANCISCO to



DISTANCE MILES	PORTS	RATE PER TON
3260	PANAMA	\$ 18. ⁰⁰
2100	HONOLULU	5. ⁰⁰
7200	SYDNEY	16. ⁰⁰
4900	YOKAHAMA	12. ⁰⁰
5750	SHANGHAI	12. ⁰⁰
6870	VLADIVOSTOCK	17. ⁰⁰

An Object Lesson,

Of all the discrimination against San Francisco merchants practiced by the Pacific Mail, that of the rates to Central America and Mexico is the worst.

Tariff for tariff is a fair comparison. Anybody will admit that.

Take the Pacific Mail tariff of freight rates on all classes of articles that our merchants are trying to sell in Central America and Mexico and contrast it with the tariff on articles to China, Japan, Siberia and Australia, and what does it show?

Simply that for the greater distances the rates are less.

You can ship a ton of merchandise to Yokohama, distance 4900 miles, for \$12; to Shanghai, distance 5750 miles, for \$12; to Vladivostock, distance 6870 miles, for \$17 60,

or to Sydney, distance 7200 miles, for \$16. But when you want to ship your ton of merchandise to Panama, distance only 3260 miles, you must pay \$18, which is a higher rate than to any of the far-distant points.

Dissect this.

Yokohama is one-half the distance farther from San Francisco than is Panama. Yet the rate is 30 per cent less to Yokohama.

Shanghai is not quite twice the distance, and yet the rates are 30 per cent less.

Vladivostock is a little over twice the distance, and the rates are 40 cents less on the ton.

Sydney is over 700 miles twice the distance, and the rates are \$1 a ton less.

The secret of the whole matter is this: San Francisco does not particularly care to ship her products to far-distant points, when she can send them to nearer places. It takes a longer time to get returns, for one reason, and there are many other better reasons. San Francisco does care to ship to Central America. There is a good market there for her. The Pacific Mail sees this, and wants to make the most of it.

It is anything to bleed San Francisco.

SHORT HAULS, HIGH RATES.

Long Hauls, Low Rates—Figures From Pacific Mail Tariffs.

Every schoolboy who has gone far enough in commercial geography to know what Guatemala, San Salvador and Costa Rica are and what they import and export knows that those countries use large quantities of imported merchandise. These are mainly sent from Germany, England and France. If the schoolboy knows anything about distances on the globe he knows that Guatemala is not situated next door to France, or even three doors away, but he knows that the United States is a near neighbor of Guatemala and that California is the nearest

American State and San Francisco the nearest large American city.

Then does it follow that France and the rest of Europe ought to have Guatemala's merchandise trade? Surely not. If any foreign country should have it it should go to the United States, and if any American city should have it that city should be San Francisco.

How can San Francisco get that trade if rates of freight are charged on the goods she sends out that are higher than are the rates to China, Japan or Australia?

Here are some quotations from the tariffs:

ARTICLES.	San Jose and Ocos.	Panama....	Sydney.....	Yokohama....	Shanghai....
	2,500 Miles	3,260 Miles	7,200 Miles	4,900 Miles	5,750 Miles
	RATES PER TON.				
Corn.....	\$12 00	\$12 00	\$8 00		
Canned Goods....	15 00	15 00	10 00	\$12 00	\$12 00
Doors.....	15 00	15 00	8 00	12 00	12 00
Leather.....	18 00	18 00	10 00	25 00	15 00
Flour.....	10 00	14 00	8 00	10 00	10 00
Hardware.....	18 00	18 00	10 00	12 00	12 00
Lumber, per M.....	24 00	20 00	14 00	20 00	20 00
Merchandise, not specified	18 00	18 00	16 00	12 00	12 00
Salmon, in bbls or cases....	15 00	15 00	10 00	12 00	12 00
Wines.....	10 00	10 00	7 00	12 00	12 00
Grain.....	12 00	12 00	8 00	10 00	10 00
Machinery	18 00	18 00	10 00	12 00	12 00

Now what reason there can be for making a tariff rate on California canned goods to San Jose de Guatemala and Panama at \$15 a ton, and then charging only \$12 a ton to Shanghai is something our merchants would like to know. One merchant said yesterday that all he could see as a reason was that the Pacific Mail was in league with the railroads to kill San Francisco if possible.

"But," said he, "San Francisco refuses to be killed. We are going to see this thing through. If the Mail Company will not haul our freights at reasonable figures when it is paid a subsidy by the Government to encourage commerce then that subsidy must be taken away. If the Mail Company's coffers are so congested with gold that it does not care for fair competition, then that congestion should be overcome and a healthy state of affairs be substituted. Our merchants are trying to gain the trade of Costa Rica, San Salvador and Guatemala. Why should not the Mail Company assist them in securing it, rather than place a bar in their way?"

"Why should it be cheaper to ship merchandise to Vladivostock, Siberia, nearly 7000 miles away, than it is to ship it to Ocos, Guatemala, 2500 miles distant? It certainly takes far less fuel and steam to run a steamer to Guatemala than it does to run it to Asia."

A careful comparison of the Pacific Mail tariffs on freights to Central America and those to Asiatic ports shows a curious state of traffic affairs. It costs \$32 to ship a 6000-round boiler down the coast to San Jose de Guatemala, and yet that same boiler will be taken clear across the Pacific and landed in Shanghai, Nagasaki or Hiogo for \$25, or \$7 less than for the lesser distance.

More strange than that is the following: The rate on a boiler weighing 2000 to 6000 pounds to San Blas, only 1600 miles from San Francisco, is \$17. On this same boiler the rate to Shanghai, distant 5750 miles, is only \$1 more, or \$18, while the distance is over three times as great.

Now take canned goods. The rate to San Blas, 1600 miles, is \$12, while to Shanghai, 5750 miles, it is just the same.

California wines pay a rate of \$12 to San Blas and the same rate to Shanghai.

And so on through the list. In nearly every case it costs as much, if not more, to ship freight 1600 to 2500 miles down the coast as it does to send it away across the Pacific.

Truly the title of "uncommon carrier" well befits the Pacific Mail.

As for Honolulu freight the shipper cannot send it by the Pacific Mail. By the Oceanic line the general rate is \$5 a ton, or one-third what it is to the Guatemalan ports via the Pacific Mail, although the distance is only 2100 miles to Honolulu.

The highest rate of freight made by the Oceanic line to Sydney is \$16 a ton, which is the same as the highest rate made by the Pacific Mail to Mazatlan. In the one case the distance is 7200 miles. In the other it is only 1350 miles, or about one-fifth the mileage to Sydney.

PUTTING ON THE SCREWS.

Driving California Merchandise to Asia via Northern Ports.

When the Empress of China sailed from Vancouver last Saturday for Asiatic ports she carried away 2150 tons of general cargo, most all of which was sent up from San Francisco.

"The Canadian Pacific Railway steamers are picking up great quantities of freight and passengers from the American lines running into San Francisco," says the Victoria News of March 12.

The News is right. Every Canadian Pacific steamer that leaves or enters the port of Vancouver carries San Francisco freight to the extent of about three-fourths of her entire cargo. The same is true with the Oriental steamers arriving at and sailing from Portland. San Francisco freight is going 800 miles out of its way in order to be reshipped and transported in foreign steamers. Merchandise from San Francisco bound for China and Japan is first carried in ships 800 miles north to Vancouver, there to be taken to its destination in vessels flying the British flag.

Why?

Because it is cheaper to ship in this round-about way than by the heavily subsidized American line of steamers. San Francisco merchants are patriotic—on Fourth of July and all other parade days—but they conduct business on business principles, and find it much cheaper to ship or receive oriental freight by British steamers.

One unacquainted with the situation would be inclined to doubt this statement, and the Man from Mars would be inclined to ridicule a commercial system that would make it cheaper to ship by an indirect than a direct route. But the facts and figures to prove the assertion are abundant, and there are hundreds of San Francisco merchants who know from bitter experience the truthfulness of these strange things.

"Few persons have a notion of the true extent of these things," said a California-street merchant yesterday, who requested that his name be suppressed through fear of still further petty persecutions by the Pacific Mail Steamship Company. "Every day tons of merchandise are leaving this port for Portland and Vancouver, there to be shipped to the Orient. The discriminations of the Pacific Mail are so unreasonably extortionate that merchants are finding it much cheaper to pay for the privilege of patronizing foreign steamship lines. Yes; pay is the proper word. It amounts to that at any rate. We are compelled to send our goods to the northern ports and there have them reshipped to their destination. Quite an unhandy method, we find it, but considerably cheaper in the end than to ship them direct by the Pacific Mail steamers. At Vancouver we must break bulk; that is, handle all the goods over again for reshipment. In this way we pay two freight bills, where we might only have to pay one.

"It is simply preposterous to think of California freight going clear to British Columbia in order to be taken out of the steamer first taking it from this port, and then to be shipped to China and Japan. But that is not likely to be the worst of it. Not content with this state of things I understand that the officials of the Pacific Mail line have been in secret negotiations with the northern steamship lines with a view of making some sort of arrangement with them whereby the latter will refuse to take California freight at the regular rates accorded to home shipments. This is putting the screws on indeed. I have my doubts as to their success in this direction, because there is so much competition in freight-carrying in the north, but I am reliably informed that active efforts are being put forth in this direction by the Pacific Mail people."

A superintendent of one of the steamship transportation companies corroborated this statement. He was aware, he said, that the Pacific Mail was trying to patch up a truce with the northern lines in order to make California shippers come to time. "They are closing up every possible loophole by which the San Francisco shippers may escape their extortionate rates," said he. "It is my private opinion, too, that they are nearing the end of their rope. There is an end even to patience and long suffering, and what with the aid of THE CALL and the enthusiasm its brave stand in the matter has created I am convinced that the San Francisco merchants will soon be enabled to throw off this iniquitous yoke. Stetson and Leeds are doing excellent work and will succeed in their aims or I am a false prophet. I hope THE CALL will keep on with its good work."

THE CAPE HORN LINE.

How the Great Southern Pacific Company Controls It.

A local traffic man said yesterday:

"The Cape Horn line of Sutton & Co. is controlled by the Southern Pacific Company, which has an arrangement whereby other lines are kept off as far as practicable by controlling available shipping. The ship-owner charters at \$7 to \$8 per ton and the charterer gets from \$10 to \$15 per ton, and it is presumed divides with the railway company, which also ships its heavy goods via Cape Horn at reduced rates. Should an independent sailing-ship be put on the rate would be temporarily reduced to prevent her making money and discouraging another trial.

"When the ship gets here she is again controlled by the railway company, which works jointly with Rousefeld's Sons, buying coal of them and having an understanding that their ships control the heavy freight which they do not want for rail carriage, including their own.

"The Sacramento River is furnished with a line of railway steamers to choke off competition to Vallejo, Mare Island and points above. This keeps the river traffic in the hands of the railway also.

"The ship Shenandoah, a four-master, is just leaving New York on Rosenfeld & Sutton's line with a cargo largely of freight belonging to the Southern Pacific Company, which uses Cape Horn, but does not want any one else to use it unless they pay a high rate to do so."

HOW THE CITY IS BLED.

March 21, 1892.

Strike a hard blow at the high local freight rates, gentlemen of the Railroad Commission, and you will earn the everlasting gratitude of the people of California.

Now is the time for striking that blow.

Never in the history of this State were the people so restive under railroad oppression as they are to-day.

Never were they so clamorous for relief.

Never has the Southern Pacific monopoly made so much money in one year as it has during the past twelve months.

Never was it more apparent that its great wealth is wrung from the people. And of this wealth it is giving large sums to throttle commerce by sea and land.

Surely now is the time. Traffic Manager Leeds has given you, gentlemen of the Railroad Board, a lesson in grain rates. He has shown you how frightfully disproportionate and discriminative are the figures on the tariff—how California is being bled that the railroad's coffers may be heaped high. How can you afford to disregard the warning? How can you afford to split hairs and haggle over technicalities in the face of the facts presented?

To-day THE CALL adds its mite to the literature of the question.

THE CALL shows that the contrast between the rates on the leading railroad line of Minnesota and the leading line in California is something wonderful to contemplate.

In selecting the Northern Pacific to afford a comparison between rates on the Southern Pacific line and those on some leading railroad not within our State, the choice was not exactly made at haphazard, for it was sought to bring into the comparison a line that had as many if not more adverse

conditions to operate under as has the California road. Then, too, it was thought best not to go too far East, for the reduction of rates by competition in such States as Ohio, Pennsylvania and New York would show the tariff charges of the Southern Pacific Company to be so much higher than are the rates in those States as to make the contrast a supremely ridiculous one.

Nothing is more clear in this article than the fact that the Northern Pacific has strained every effort to build up the commerce of the city of St. Paul. That town has grown wonderfully and this is largely the result of low rates of freight.

On the other hand, what is the Southern Pacific Company doing to encourage the commerce of San Francisco?

What kind of freight rates does it give us?

The very highest that it dares to charge.

You do not believe this, gentlemen of the commission? Take a look at THE CALL's comparative schedules. Here is an extract for you:

	Rate per Ton
<i>Agricultural Implements, from St. Paul to Valley City, distance 309 miles, by the Northern Pacific.....</i>	<i>\$7 00</i>
<i>Agricultural Implements, from San Francisco to Bakersfield, distance 302 miles, by the Southern Pacific.</i>	<i>17 00</i>
<i>Brick, from St. Paul to Valley City..</i>	<i>3 60</i>
<i>Brick, from San Francisco to Bakersfield</i>	<i>6 70</i>
<i>Dry Goods, from St. Paul to Valley City.....</i>	<i>17 60</i>
<i>Dry Goods, from San Francisco to Bakersfield.....</i>	<i>32 40</i>
<i>Iron Castings, from St. Paul to Valley City.....</i>	<i>7 00</i>
<i>Iron Castings, from San Francisco to Bakersfield</i>	<i>21 40</i>
<i>Stoves, from St. Paul to Valley City..</i>	<i>7 00</i>
<i>Stoves, from San Francisco to Bakersfield</i>	<i>21 40</i>

And so it goes, all the way down the list.

We are taxed from 100 to 200 per cent higher than the St. Paul people are taxed by the railroads.

One hundred to two hundred per cent!

Think what that means when the cost of the article laid down at its destination is considered. Who pays that 100 to 200 per cent of extra cost?

The consumer, of course. But the merchant is also levied upon and his trade is dwarfed by this cruel means. For if goods and provisions can be sold cheaply in a place people will go to that place to live.

See how the Northern Pacific has built up St. Paul. See how it has built up Tacoma. See how it has built up the whole State of Washington. Is that not an object lesson for us?

Then, too, Messrs. Commissioners, see how the Railroad and Warehouse Commission of Minnesota has figured in the matter. Its persistent hacking away at the railroad freight tariffs has resulted in great reductions in rates, and the results have been highly beneficial to the people of Minnesota.

What is Minnesota that she should be so greatly favored in this respect? Is she a better State than California? Is she one-half so productive?

Consider these things and bear well in mind this fact: If the Southern Pacific's rates on many of the leading articles of freights on the valley lines were cut in two in the middle they would still remain higher than those charged by the Northern Pacific, a road which has cold weather and great snows to contend with for four months of the year.

It is all in your hands, gentlemen.

SIDE BY SIDE.

The Northern Pacific and Southern Pacific Local Rates Contrasted.

Success like that of the Northern Pacific is proof enough of the fact that a railroad company may make money without charging perpendicular rates.

The Northern Pacific has never tried to "hog everything."

Its local rates, in comparison with those of the Southern Pacific Company, show up very well for the Northern line—very well, indeed, and that is putting it mildly.

The Northern Pacific has adopted the policy of building up the towns and cities in its territory. It is a strange policy for a railroad, viewed in the light of the opinions of the gentlemen who preside over the Southern Pacific corporation. It is strange the Southern Pacific people think to assist in making a city like St. Paul a distributing point for goods of every class. "Why, St. Paul is a big town. There is lots of money there. Why not bleed it and get all you can—you insane Northern Pacific people? You do not know how to run a railroad. Come over here and we'll show you how to make money. We will show you rates that are three to four times as high as yours. You can't get such rates as those for your freight, unless you adopt our methods. Let us give you a few pointers.

"First, last and all the time, let your motto be, 'All the traffic will bear.'"

"Pull the wool over everybody's eyes.

"Make it appear that it costs six times as much to run a railroad in your State as it does anywhere else.

"Manipulate your Legislature and make bosom friends of your Railroad Commissioners.

"Have a high officer of your company in the United States Senate.

"Keep a trusty financier in New York to throttle through competition of every kind.

"Get up all kinds of schemes to maintain your position—no matter how nice or how nasty.

"Work the shippers for all they're worth."

And now for the comparisons. A station about 300 miles north from San Francisco was selected as one point for which rates might be selected for the tariff. As the rates might be different in another direction, and in order to do no injustice to the Southern Pacific Company, a point about 300 miles south was also chosen.

The northern point is Dunsmuir, 297 miles from San Francisco, via Stockton.

The southern point is Bakersfield, 302 miles south of San Francisco.

On the Northern Pacific, Valley City, 309 miles west of St. Paul, was chosen.

Grand Forks, 320 miles north of St. Paul, was also selected.

Particular attention is called to these distances. In each case the Southern Pacific is favored, so as to allow for possible inequalities as to gradients. The comparisons are made, two and two, in this way:

	<i>Miles.</i>
<i>Northern Pacific—St. Paul to Grand Forks</i>	320
<i>Southern Pacific—San Francisco to Dunsmuir</i>	297
<i>Northern Pacific—St. Paul to Valley City</i>	309
<i>Southern Pacific—San Francisco to Bakersfield</i>	302

Here is the showing for the first two distances chosen, carload rates being given in all cases, except where otherwise designated:

COMMODITIES.	Southern Pacific— San Francisco to Dunsmuir, 297 miles.		Northern Pacific— St. Paul to Grand Forks, 320 miles.	
	Rate per ton	Rate per ton	Rate per ton	Rate per ton
Agricultural implements, O. R.....	\$7 20	\$13 12		
Acids, O. R.....	7 20	21 60		
Bags, grain.....	11 80	13 12		
Brick, common.....	3 60	9 50		
Burlaps.....	7 20	13 12		
Beans.....	7 20	11 80		
Broom corn.....	*43 20	*70 80		
Charcoal.....	4 40	10 10		
Clay, fire.....	4 40	9 50		
Dry goods, L. C. L.....	18 00	36 00		
Fruit, green, N. O. S.....	11 80	14 20		
Fruit, dried, N. O. S.....	9 00	16 40		
Fruit, dried.....	9 00	14 60		
Horns and horns.....	4 40	9 50		
Iron—				
Bar, band and boiler.....	7 20	14 20		
Bridge materials.....	7 20	14 20		
Castings, heavy, N. O. S.....	7 20	16 40		
Nails.....	7 20	14 20		
Pik.....	4 40	14 20		
Pipe, wrought.....	7 20	14 20		
Pipe, cast.....	6 40	14 20		
Scrap.....	4 40	9 50		
Junk.....	4 40	10 10		
Jute.....	6 40	14 20		
Lead, pig.....	7 20	14 20		
Lime.....	5 40	10 10		
Liquors and liquids, N. O. S.....	11 80	21 60		
Machinery, N. O. S.....	7 20	16 40		
Oil, coal, in box tankcars.....	7 20	16 40		
Oil, coal, in cylinder tankcars.....	7 20	21 60		
Pitch.....	4 40	9 50		
Plaster.....	7 20	10 10		
Rags, in bales.....	6 40	10 10		
Sand.....	3 60	7 60		
Slate roofing.....	4 40	10 10		
Stoves.....	7 20	16 40		
Tallow.....	7 20	14 20		
Tar.....	4 40	9 50		
Vegetables, N. O. S.....	5 40	14 20		
Potatoes.....	5 40	8 90		
Onions.....	5 40	8 90		
Wire, cable.....	7 20	16 40		

*Full carload.

L. C. L.—Less than carload lots.

O. R.—Owner's risk.

N. O. S.—Not otherwise specified.

It will be seen that the rates on agricultural implements by the Southern Pacific are nearly twice as high as they are by the Northern.

Acids are rated three times as high.

Grain-bags are \$1 32 a ton higher.

Brick are three times as high.

Beans are nearly twice as high.

Broom-corn shows a marked difference in favor of the Minnesota shipper, the rate being only a little over half that paid by the Californian.

Charcoal-shippers pay less than one-half in Minnesota what they do in California.

Fire clay goes nearly 50 per cent cheaper.

And dry goods! The St. Paul merchant can ship out his stock at \$13 a ton for 320 miles, while at the same identical moment San Francisco dry goods are going over the rails only 297 miles at \$36 a ton. No wonder our merchants are complaining of perpendicular rates.

We dry fruit in California. They don't in Minnesota, because they haven't any to speak of. That is probably the reason why California dried fruit, sold by a St. Paul shipper to some customer 300 miles away only has to pay \$9 a ton, while in California our dried-fruit shipper pays \$14 60 a ton. Encourage home industry, do they, these Southern Pacific people? So does water run up hill.

Yes, water will run up hill if you can force it through a pipe. Let us buy a ton of pipe in St. Paul and ship it to Grand Forks. All we will have to pay a ton for cast-iron pipe is \$6 40. If it is wrought-iron we will have to pay a little more—\$7 20. Well, now, we have laid our pipe down at Grand Forks. Let us send another ton from San Francisco to Dunsmuir. What's this? Rate, \$14 20 a ton? Go away. We don't want to send any pipe to Dunsmuir. We can get more for it down in Bakersfield, anyway, and the distance of shipment is about the same. They want pipe down there for irrigating purposes. What's the rate to Bakersfield? You don't mean it? All pipe, cast or wrought, \$20 20 a ton. Say, I guess we'll do business in St. Paul.

Now coal-oil is a cheap commodity. The rate on that had not ought to be very high, had it? In Minnesota the railroads do not make any distinction between coil-oil shippers. You can ship just as cheaply if you don't happen to be in the Standard Oil ring. Let us see. Rate from St. Paul to Grand Forks \$7 20, whether you ship your oil in box-tank cars or cylinder-tank cars. Now for the Southern Pacific rate. Ah, there are two rates. Yes, one is for the Standard Oil Company. The higher one? No, the lower, of course. Standard Oil is a monopoly. Don't you know that? Standard Oil's oil in box-tank cars \$16 40. Other people's oil in cylinder-tank cars \$21 60. The other people's oil rate is more than three times as much as the anti-trust rate made by the Northern Pacific.

A great gulf of difference divides the lime rates of the two roads. It is the difference between \$5 40 and \$10 10 a ton.

Potatoes move freely in Minnesota for \$5 40. Farmers out here are supposed to keep their potatoes in their bins. If not, why not give them a lower rate than \$8 90?

San Francisco makes miles and miles of wire cable. When they want to use any up in the northern part of the State they have to go without it or pay \$16 40 a ton. It's very heavy, is wire cable. It is particularly heavy in California. In Minnesota a ton of it only weighs 2000 pounds, and the Northern Pacific cheerfully hauls it 320 miles for \$7 20.

In the comparison between the rates 300 miles west from St. Paul and 300 miles south from San Francisco, it will be seen that the same wide difference between the Southern Pacific's figures and those of the Northern Pacific is at once found.

Here are the rates of each line:

COMMODITIES.	Northern Pacific— St. Paul to Valley City, 309 miles...	Southern Pacific— San Francisco to Bakersfield, 302 miles...
	Rate per ton	Rate per ton
Agricultural implements, O. R.....	\$7 00	\$17 12
Acids, O. R.....	7 00	24 00
Bags, grain.....	11 40	17 12
Brick, common.....	3 60	6 70
Burlaps.....	7 00	17 12
Beans.....	7 00	6 00
Broom corn.....	*42 00	*60 00
Charcoal.....	4 40	6 70
Cay. fire.....	4 40	6 70
Dry goods, L. C. L.....	17 60	32 40
Fruit, green, N. O. S.....	11 40	20 20
Fruit, dried, N. O. S.....	8 80	21 40
Fruit, dried.....	8 80	10 00
Hoofs and horns.....	4 40	6 70
Iron—		
Band, bar and boiler.....	7 00	20 20
Bridge material.....	7 00	20 20
Castings, heavy, N. O. S.....	7 00	21 40
Nails.....	7 00	20 20
Pig.....	4 40	20 20
Pipe, wrought.....	7 00	20 20
Pipe, cast.....	6 20	20 20
Scrap.....	4 40	6 70
Junk.....	4 40	6 70
Jute.....	6 20	20 20
Lead, pig.....	7 00	20 20
Lime.....	5 20	6 70
Liquors and liquids, N. O. S.....	11 40	24 00
Machinery, N. O. S.....	7 00	21 40
Oil, coal, in box-tank cars.....	7 00	21 40
Oil, coal, in cylinder-tank cars.....	7 00	24 00
Pitch.....	4 40	6 70
Plaster.....	7 00	6 70
Rags, in bales.....	6 20	6 70
Sand.....	3 60	5 38
Slate roofing.....	4 40	6 70
Stoves.....	7 00	21 40
Tallow.....	7 00	20 20
Tar.....	4 40	6 70
Vegetables, N. O. S.....	5 20	20 20
Potatoes.....	5 20	5 0
Onions.....	5 0	5 50
Wire, cable.....	7 00	2 40

* Full carload.

L. C. L.—Less than carload lots.

O. R.—Owner's risk.

N. O. S.—Not otherwise specified.

The Southern Pacific makes a slightly lower rate on beans from San Francisco to Bakersfield than does the Northern Pacific from St. Paul to Valley City. That is because there are no beans to be hauled to Bakersfield. Bakersfield grows her own beans.

But how about agricultural implements? Bakersfield needs those. Consequently the rates are high.

Nails may be shipped 300 miles on the Northern Pacific for \$7 a ton. On the Southern Pacific it costs \$20 20.

Pigiron may be shipped on the Northern Pacific for the same distance for \$4 40 a ton. On the Southern Pacific it costs \$20 20 or nearly five times as much.

Castings go for \$21 40 a ton on the Southern Pacific, which is three times the Northern Pacific local rate.

Study up these tables presented by THE CALL, Mr. Litchfield! Take a good look at them, Mr. Beckman! Take them home with you, Mr. Rea!

COST OF CARRIAGE.

The California Railroads Are Greatly Favored by Nature.

"But it costs more to run a railroad in California than it does in Minnesota."

Does it?

Let us see.

For four months of the year the Northern Pacific is subject to blockade by heavy snows. Everybody knows how expensive a snow blockade is to a railroad.

How much snow does the Southern Pacific encounter annually on the run down the San Joaquin Valley between San Francisco and Bakersfield? How much snow does it have to contend with for the whole length of the Sacramento Valley?

Any schoolboy can answer those questions.

Any schoolboy knows well enough that Minnesota is one of the coldest if not the coldest State in the Union.

Aside from snow-blockades, how does cold weather effect railroad traffic?

Let a railroad man answer that question. He is an expert, and he writes as follows on "The Winter Resistance of Trains" for the National Car Builder, a railroad paper, largely devoted to railroad interests, and circulated almost exclusively among railroad men:

"At this season of the year, when traffic is nearly always heavy, and being this year phenomenally so, railroads are confronted with the fact that, because of the increased resistance of trains to being pulled in cold as compared with warmer weather, fewer cars can be hauled per train. Instead of increasing the tonnage hauled per train, as would be desirable in view of the great rush and recent blockade of traffic, trains must actually be cut down, according to the prevailing temperature, to two-thirds or one-half the tonnage hauled easily in summer.

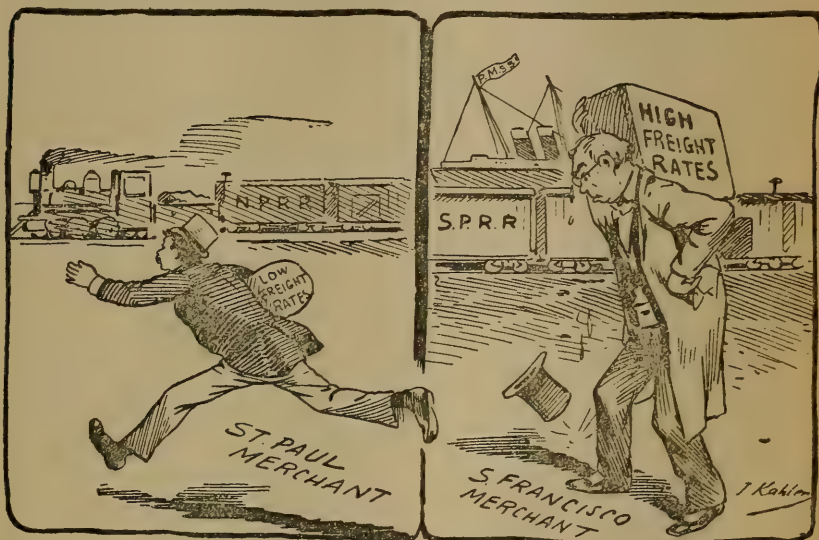
"With the motive power and other facilities of a road heavily taxed to handle traffic with the ordinary weight per train, it often becomes impracticable, when the weight per train must be cut down, to in-

crease the number of trains sufficient to handle traffic properly, and delays and blockades, with their attendant losses, follow. Thus it is that the effect of cold is to decrease the efficiency of railroads.

"The resisting force of friction in oil depends entirely upon its state of consistency, and in ordinary lubricating oils this depends entirely upon the temperature. Carefully conducted railroad laboratory tests have demonstrated that with a fall of temperature of 70 degrees the friction was doubled with the same lubricating oil. The colder the oil the greater is the viscosity, and the greater the viscosity the greater the friction between the sticky layers of oil adhering to the journals and their bearings in rubbing against each other, thus increasing the resistance of the train to being hauled,

preventing the use of steam while descending grades that in summer the trains run down several miles at the desired speed without any assistance from the engine.

"The increase of locomotive fuel consumption due to colder temperature very materially increases operating expenses in winter. Carefully kept records of the variation of temperature and of locomotive coal consumption, on a prominent Western railroad, showed the average variation in coal consumption, per one degree of varied temperature for four years, to be .06 pound coal per passenger car mile and .03 pound coal per loaded freight car mile. At this rate a fall of 50 degrees in temperature would cause a freight engine to burn 1.5 pounds of coal more per car mile and a passenger engine 3 pounds more per car mile.



A Low Freight Tariff Means an Easy Burden for the Merchant.

making necessary a reduction in the weight of train, and, as stated, lowering the efficiency of the road.

"The larger portion of the greater fuel consumption of locomotives in winter is also due directly to this cause, although the colder feed water, radiation, and colder air and fuel for combustion are important factors. Because of the friction in the congealed lubricating oil locomotives use steam over many more miles of road each trip in winter than in summer. This is brought about in two ways. First, by causing trains approaching stations to 'hang back' after steam is shut off, thus compelling the use of steam probably a quarter of a mile closer up to each station than is necessary in summer; and second, by preventing the trains from running down hill freely, com-

If the freight engine hauled 18 cars 100 miles, the extra coal consumption would be 2700 pounds, and if the passenger engine hauled five coaches 100 miles, the extra coal consumption would be 1500 pounds. This is not very far from the actual results in practice. The average extra coal consumption of the engines in the two classes of service due to the colder temperature would be a little over one ton per trip of 100 miles. On a railroad operating 470 locomotives, each making 100 miles per day for a month, this excess in fuel consumption, as stated, would amount to over 14,000 tons, which, at a cost of say \$1.50 per ton, would be \$21,000.

"On a railroad actually operating this number of locomotives the difference in coal consumption between July and January recently was actually 12,699 tons excess for

January as compared with July, which, at the cost stated per ton, did amount to over \$19,000, and there was an average decrease in cars hauled of 0.59 car per passenger train and 1.89 cars per freight train, as compared with July."

Now the Northern Pacific uses just about the same number of locomotives as are mentioned in the foregoing article. It may be that it is the road referred to as spending \$21,000 more a month for coal in winter than in summer. As a matter of fact, however, the Northern Pacific's coal costs over twice \$1 50 a ton, which would make the total over \$42,000.

"But coal costs more in California than it does in Minnesota," declare the railroad people.

Yes, the poor, cheap, soft coal that the Northern Pacific burns in Minnesota costs on an average \$3 35 a ton at the point of distribution, while for wood the cost is \$3 21½ a cord. The Southern Pacific uses a fair quality of coal that costs, so it declares in its reports, \$6 18 a ton, while its wood costs \$4 70 a cord. Now, that \$6 18 a ton is what the coal is supplied for by the Pacific Improvement Company, which, as is well known, is only a wheel within a wheel of the Southern Pacific Company. If that coal actually costs Huntington and Stanford \$5 a ton, it will be a matter of wonderment. It is surprising to note, however, how much wood is burned by the Southern Pacific Company, instead of coal. While it burned, according to its report to the Railroad Commissioners for 1890, 542,010 tons of coal, it also burned 141,655 cords of wood. It reports the cost of the wood at \$4 70 a cord. It would be interesting to know what the actual cost was.

But suppose it actually pay, \$6 18 a ton for coal. Better yet, suppose it actually pays twice that sum or \$12 36 a ton, how does the consumption of coal count in to such a wonderful extent as the railroad people are always claiming it does? What is the actual cost of coal for hauling a ton of freight to Bakersfield? Supposing it be a ton of grain bags, for instance. For hauling that freight to Bakersfield, 300 miles, the company receives \$17 12.

Now, the average number of pounds of fuel consumed per mile by the Southern Pacific locomotives is reported by the company at 62.20. This includes coal as well as wood—the latter of course being lighter. It is not known how much to deduct for the weight of the wood, but to give the company every advantage in the computation, nothing will be deducted. Call it 62.20 pounds straight, and all coal at \$12 36 a ton, or twice as much as it claims to pay.

The 62.20 pounds of coal is consumed in an average mile's run over all kinds of grades, but nothing will be deducted for the 300 miles of almost straight and level track to Bakersfield, so that the quantity of coal consumed would be nine tons, which at \$12 36 a ton would amount in cost to \$111 24. This, of course, is for the whole train. The

Southern Pacific Company reports the average number of tons of freight in its freight trains at 136.86. This, as will be seen, makes the cost of coal for hauling the single ton of grain-bags to Bakersfield about 80 cents.

Remember this is at the double rate per ton of coal, or \$12 36. Then, too, the averages used all include the mountain divisions, where trains are short and two locomotives are sometimes necessary to the train, whereas in the San Joaquin Valley, over which the grain-bag run is made, the road is almost as level as a floor.

But what does all this show? Simply that the cost of coal—that great bugbear of the Southern Pacific Company—amounts to a very little when it is run down and closely examined. One-half of 80 cents is 40 cents. Now we are somewhere near the actual cost of coal for carrying the ton of grain-bags to Bakersfield. But we are liberal and will call it 50 cents.

Fifty cents' cost for coal for hauling one ton of bags 300 miles, while the tariff charge is \$17 12. Now treble the cost of the coal and call it \$1 50. Then deduct that imaginary expense to the Southern Pacific and the net grain-bag rate, with the coal cost deducted, is \$15 62.

That rate—\$15 62—is still \$4 22 higher by the Southern Pacific than is the tariff charge for grain-bags 300 miles on the Northern Pacific!

So it is seen that some other argument besides the awful cost of coal must be adopted by the Southern Pacific Company in explaining its high freight rates.

The whole estimated cost of carrying one ton of freight one mile on the Northern Pacific, according to the Minnesota Railroad Commissioners' report, is .848 of a cent. Call it twice that amount on the Southern Pacific, or 1.696 cents, and the whole cost of carrying one ton of freight 300 miles to Bakersfield is only 50.88 cents, which was the figure THE CALL put it at in its previous illustration.

As a matter of fact the cost of carriage to the company is not twice as much as on the Northern Pacific. It would be very surprising to find, considering the winter resistance of trains before remarked, if it costs three-fourths as much to run a railroad train in the San Joaquin Valley as it does in Minnesota.

What this winter resistance amounts to, taking the whole year through, may readily be seen. The Northern Pacific has the same class of freight locomotives as the Southern Pacific, and yet the average number of tons of freight hauled in a train on the Minnesota line is reported at only 130.2, while on the California line it is 136.86.

A WAGE COMPARISON.

There Is No Great Difference in the Items of the Two Pay Rolls.

"But our salary list—it shows higher wages than the others all around," say the Southern Pacific people.

Not so.

Here are some of the wages paid by the Southern Pacific Company contrasted with those of the Northern Pacific:

Class.	Northern Pacific's pay per day.	Southern Pacific's pay per day.
General officers...	\$14 05	\$14 18
Station agents....	2 23	2 61
Engine men.....	4 48	4 35
Firemen.....	3 59	2 57
Conductors.....	3 11	3 72
Other trainmen..	3 21	2 90
Carpenters.....	3 60	3 17
Sectionmen.....	1 39	1 54

It will be observed that the general officers' compensation averages less on the Northern Pacific than on the Southern Pacific, but when it comes down to the actual toilers of the rail there is little actual difference. Office clerks not included in the list receive from \$2 to \$5 a day on the Northern Pacific and about the same on the Southern. The average pay of enginemen is higher on the Northern Pacific than on the Southern, and so is that of firemen, while carpenters also receive higher compensation on the Minnesota line. But the wages see-saw back and forth in the different classes on the two roads, and the reader readily sees there is little, if any, essential difference.

A GOOD EXAMPLE.

How Rates Have Been Reduced by the Minnesota Commissioners.

The railroad and warehouse commissioners of Minnesota have done good work of recent years in the reduction of freight rates. Here are some figures showing the difference between rates on the Northern

Pacific in 1880 and 1890. The rates for the latter year are still in effect with some slight changes:

COMMODITIES AND YEAR.	25 Miles.	50 Miles.	100 Miles.	250 Miles.
Wheat, per 100 lbs., 1880.	\$0 12	\$0 16	\$0 19	\$0 25
Wheat, per 100 lbs., 1890.	04 1/2	07	10	16
Livestock, per 100 lbs., 1880.	07 1/2	13 1/2	20	32 1/2
Livestock, per 100 lbs., 1890.	04 1/2	07 1/2	10	16
Coal, per ton, 1880.	1 60	2 00	3 40	4 00
Coal, per ton, 1890.	04 1/2	07 1/2	10	16
Merchandise, first class, per 100 lbs., 1880.	26	45	65	99
Merchandise, first class, per 100 lbs., 1890.	13	27	44	72
Merchandise, second class, per 100 lbs., 1880.	23	37	52	84
Merchandise, second class, per 100 lbs., 1890.	11	23	37	61

Study this little table, gentlemen of the California Railroad Commission. Then contrast the rates therein quoted with the rates for the same distances in California.

It will open your eyes.

PACIFIC MAIL'S LASSITUDE.

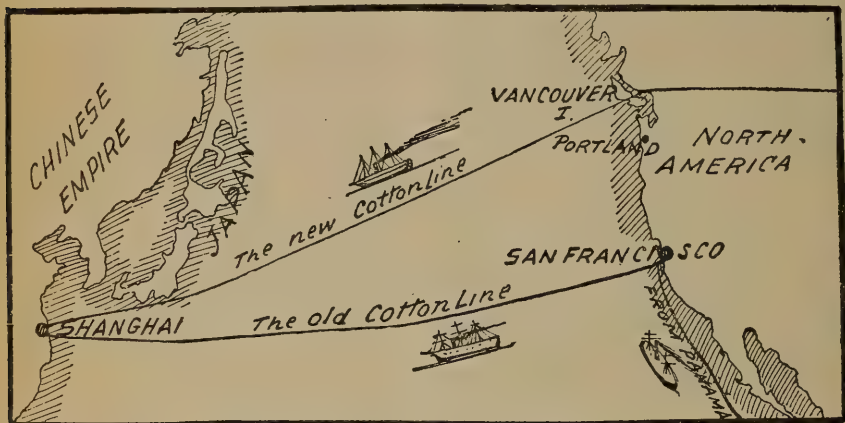
March 24, 1892.

Surely the Pacific Mail deserves the title of "an uncommon carrier."

THE CALL has told how the steamship company has let the tea trade slip away from San Francisco.

Reference has been made to the fact that

about that. It is only natural. The Chinese, while very quick to imitate the white man in other fields of industry, have not yet learned to mill cotton to an advantage. Cotton grown in China and manufactured there is vastly inferior to the



"THIS MUST BE REMEDIED."

the rates charged on the Panama route to and from this city are higher than they are for the haul clear across the Pacific, over twice the distance.

The subsidy matter has been treated with due attention.

The Panama Railroad contract has been made conspicuous.

But this is not all, nor the worst of it.

Attention will now be called to some very important facts with relation to west-bound trans-isthmian and trans-Pacific traffic. On this THE CALL will not elaborate. It is not necessary. The bare facts are sufficient. Anybody can point the moral.

China uses American cotton—thousands of bales of it. There is nothing strange

material from and manufactured elsewhere.

For many years after England opened up the seaport trade of China to the world Europe controlled the cotton trade of Eastern Asia. A great deal of the cotton used by the Chinese was shipped from America in a raw state, manufactured in England, France or Germany, and sent to Hong-Kong, Canton or Shanghai around the Cape of Good Hope, or, later, through the Suez Canal.

Our diplomatists, legislators and other encouragers of commerce had to almost move heaven and earth to induce the Chinese merchants to order their cotton shipped to Hong-Kong via San Francisco.

At last, when it seemed as if the

task of blowing the dust of solidly formed custom off the backs of the Asiatics was a hopeless one, success crowned the efforts of the agitators on behalf of San Francisco.

The Chinese cotton trade—a goodly portion of it, at least—was finally started by way of the Isthmus of Panama and San Francisco.

The cotton came from the Southern States. What was sent by way of this port to Shanghai, Hong-Kong, Canton and other Chinese cities kept several mills running in Georgia.

"I have seen as many as 150 tons of cotton come up on the Panama steamer," said a gentleman yesterday. "I was in the steamship business myself, and used to notice all the freight that came into and went out of this port. The docks used to be piled high with the bales, and their presence there used to be the means of giving employment to a good many freight-handlers. I think that during the shipping season the cotton used to come in at the rate of 100 tons a month. It remained here until the steamer sailed for China, and then it went on its way."

That was in the days when the Pacific Mail had the trans-Pacific trade all its own way. Now, there is a competitor in the field. Being heavily subsidized the Pacific Mail Steamship Company does not care to make rates to keep business away from competing lines. It has let this cotton trade slip away from it, and now it is lost to San Francisco.

When the Canadian Pacific opened its through route from New York to Japan and China, via Vancouver, it made a strong bid for the cotton business, along with the other traffic. Listlessly the Mail Company looked on and saw the trade leaving it. It made no move to prevent this great loss. Any other line, steamship or railway, would have reduced its rates and put them on a basis that was calculated to control the traffic. Any other line would have made it a matter of pride to have kept that cotton trade, even though there had been a very small profit in the hauling of it. There are transportation companies that would even have carried that cotton at a loss rather than have seen it gone over to a competitor.

But the Pacific Mail is an uncommon carrier. It permitted a common carrier, the Canadian Pacific, to get the business from it and to keep it.

If the Pacific Mail had had the interests of San Francisco at heart in the least way it would not have done this. It would have held on to that cotton.

"San Francisco has lost the Chinese cotton trade because of high rates of freight," said a traffic authority yesterday. "The

reason for its disinclination to reduce the rates and keep the business is that the high rates maintained by the Mail Company on the Panama line would be affected by the cutting down of the tariff in the case of any commodity carried."

Vice-President J. B. Houston of the Pacific Mail, who is located in New York, does not like the way THE CALL has been letting the sunlight into the dark and secret places which his company does not want to have people peer into.

In a recent interview with a New York reporter Mr. Houston said that the Pacific Mail Steamship Company had done all that it could, without sacrificing its own interests, to build up the San Francisco trade. "There is no reason why we should carry freight anywhere else than San Francisco," said he, "and we have endeavored to favor that place. In our January schedule both freight and passenger rates between San Francisco and Central and South American points were reduced in order that San Francisco might keep that South Pacific coast trade as against the competition of the German and British steamship lines which run through the Straits of Magellan."

All this sounds well. San Francisco believes about as much of it as she believes of the "Book of Mormon."

Tell us about that subsidy, Mr. Houston. Give us the actual figures of the amount your company receives from the railroads to "hold up" San Francisco as a stagecoach is "held up" on the public highway.

By the way, Mr. Houston, how much does the Central Pacific Railroad Company, singly, alone, nobody-else-included, pay the Pacific Mail as a part of this commerce-stifling proceeding?

Give us those figures—those actual figures, representing the amount of that subsidy that has come from the Central Pacific alone for the past eight years, and we will name you a sum, just a fourth of that, that has been deliberately appropriated from the funds of the United States Government and paid over to your company.

"How is that?" you ask, innocently.

"Why, you know well enough, Mr. Houston, that for years past under the Thurman act the Central Pacific has been compelled to pay to the Government, as a part of the money due it, 25 per cent of all its net earnings. You know that very well."

Now, suppose the Central Pacific's contribution to that \$14,500,000 subsidy money was \$4,000,000. It may have been more, it may have been less, but put it at \$4,000,000. Was not one-fourth of that deliberately kept out of the Government's hands? Did your company not receive one million big round American dollars into its coffers that belonged by right to the Government? Of course it did.

Here is the way the Pacific Mail treats its best friends:

A big coffee-dealer of this city wanted to ship coffee aboard the Mail steamers from a little sea-coast town in Mexico. He was

told that the Mail company could not run its steamers in there. There was no wharf.

"Well, what will we do? We want to get that coffee trade."

"Why, build some lighters."

"What are lighters?"

"Why, the kind they use down there are surf-boats. They run from the beach to the steamer, and will carry a good deal of coffee, if built large enough."

So the coffee shipper had two surf-boats built in this city.

"What is the lowest figure for which you will carry these boats to Mexico?" they asked of the Mail Company's agent.

"Six hundred dollars apiece."

"Six hun—— what?" exclaimed the astonished shipper.

"Yes, \$600, or \$1200 for the two."

This exhibition of cool nerve froze the shipper's imagination. He had been dreaming of \$100 as the outside figure for the two.

At last he consented to the rate and the surf-boats went down on the steamer.

Here was a man who was making arrangements to run these boats to give new trade to the Pacific Mail. But that was not the worst of it.

The boats only cost \$200 apiece.

WHAT THE MERCHANTS SAY.

March 17, 1892.

"THE CALL is making a vigorous and intelligent fight, and some good must come out of it," said J. B. Stetson of the firm of Holbrook, Merrill & Stetson yesterday morning. He was speaking of the efforts being made by this journal to enlighten the public upon the wrongs perpetrated by the transportation interests, not only through their political machinations, but as a direct consequence of the nefarious alliance between the Southern Pacific Railroad corporation and the Pacific Mail Steamship Company. Continuing his talk Mr. Stetson said: "There has been more stir in this city during the last two or three months, in regard to this question of freights and fares, than there has been for years. THE CALL is really doing magnificent work in awakening the public conscience to a realizing sense of the manner in which trade is being oppressed. The information collected is just what is needed. The \$1,000,000 paid every year by the railroad company as a subsidy to the steamship company comes from every man, woman and child in this community. It is an outrageous extortion.

THE GOOD RESULT.

"The facts stated by THE CALL I know to be unimpeachable. They are true, every one of them. I know it, because as President of the Traffic Association I helped to gather many of them. You have accomplished one good result already in forcing the Railroad Commission to show its hand. It was something of an achievement making them set up their nonsensical plea that they are a bench of judges and require complaints to be filed and all that sort of thing when they are paid \$20,000 a year to protect the public against railroad oppression. The fight must go on and I hope THE CALL will keep it up."

Captain W. L. Merry, who was seen a little later, said: "THE CALL is doing good

work and I fully appreciate its value, as do all the merchants of San Francisco. This transportation problem is a vital one to everybody. All I can say now is that if this spoliation is to remain unchecked there won't be anybody left in this city to read the newspapers. I am glad to see that the people at large are beginning to interest themselves in this question, which is not one that by any means exclusively affects the mercantile interests."

CHANGE IN PUBLIC SENTIMENT.

A member of the firm of A. Lusk & Co., being invited to give his opinion of the situation, said: "I am delighted with the course adopted by THE CALL. It is doing splendidly. Why there has been an immense change in public sentiment in this city lately. Compare the attitude of the people to-day with that of even a year ago and you will notice a surprising difference. Mention the railroad question a year ago to anybody and if anything was said in reply it was with awe and bated breath. To-day on the streets and in the streetcars and everywhere people do not hesitate to very freely express their opinions. They talk right out loud. Everywhere above the din of conversation you hear the words 'Transcontinental Association' and 'Traffic Association.' A great popular educational movement has been set going by THE CALL. You hear nothing discussed in the city to-day but the momentous question.

CANNED GOODS SHUT OUT.

"In regard to the effect of the Pacific Mail subsidy paid by the railroad company, all I can say so far as the shipment of canned goods is concerned is that the Pacific Mail Steamship Company will not make a living rate for us. In other words, the rate is so high that it amounts practically to a prohibition of sending canned goods to New York by the isthmus route. It is a fact, also, that there has been a falling off of nearly 60 per cent within one year of the overland shipments of canned goods from San Francisco. The railroad freight rates is killing this branch of traffic. We have,

however, found our remedy. It is sailing-ships. The bulk of California canned goods to the East hereafter will be shipped round the Horn.

"In my judgment before we can abate this evil we must get down to its root. It has its base in corrupt politics, and the reform must begin with the people working through their party conventions. There is no reason why this terrible grievance should not find expression in the platforms of all parties and the agitation for redress be maintained until officers are elected who will do their duty and stand by the people. The Oregon Railroad Commissioners brought the railroad corporations in that State to their senses, and I don't see why the people cannot make their Railroad Commissioners do the same thing."

MR. CASTLE'S STARTLING DISCLOSURE.

F. L. Castle of Castle Brothers contributed a new and startling item to the controversy. He said: "To sell our tea in Denver we have to ship by the cheaper route via Tacoma. But that is not the worst of it. In such event, in order to conform to the law, we have to send 10 per cent of the cargo to the Chicago Custom-house to be appraised. Unless the teas are examined in Portland, which is not always easy to do, we must go to the Custom-house at Chicago."

"The difference in the through freight rate for tea between the route from Japan to Oden via San Francisco and the northern routes to the Missouri River is nearly 100 per cent against the San Francisco jobbers."

"I think THE CALL is doing the city a most excellent service in calling attention to this matter. But let me suggest that the crusade ought to be carried into the country towns. The people of the interior ought to be roused as well. The country papers ought to join in the agitation. The farmers of the State ought to be enlightened. Their grain is worse taxed than our teas and other classes of goods by these destructive combinations."

REAL ESTATE INTERESTS JEOPARDIZED.

"It is in the local charges that there is most need for a radical change in railroad rates. The existing rates hamper the trade of San Francisco with the interior. The merchants of this city, it might be well to bear in mind, are but a small class of the large number of people ruinously affected by the railroad discriminations against the city. Your real estate men and your owners of large blocks of land are made joint sufferers with the merchants. They cannot afford to stand by idly and without a murmur see the trade of San Francisco taken away. They must be up and doing, too, if they expect there is to be a day of deliverance."

THE RAISIN INDUSTRY ATTACKED.

A gentleman in the office of W. T. Beck, the dried-fruit merchant on California street, said that the shipment of dried raisins to the Eastern market had almost ceased to be profitable. The small profits were

eaten up by the freight charges. Prices had fallen but freight rates were maintained. He said the growers and packers received 2 cents a pound for raisins, while the railroad company charged \$1 40 per hundred pounds for carrying them to a market. As an instance of the situation of the raisin-growers he remarked that when they received \$1 25 per box of 20 pounds they had to pay the same freight charge as they do now when they are only receiving 85 cents per box.

E. H. Gould, one of the leading raisin growers and packers, who operates both in Yolo and Fresno, said he had no complaint to make against the railroad company so far as their service was concerned. They provided good cars and gave prompt delivery, but their local rates were prohibitory, even if it were practicable to ship raisins by water via the tropics to the East. The raisin men were paying much more than the traffic would bear. The mistake was that the Transcontinental Association in fixing the rates failed to recognize the fact that raisins could not be shipped at a profit under existing charges.

WHY COFFEE IS SAFE.

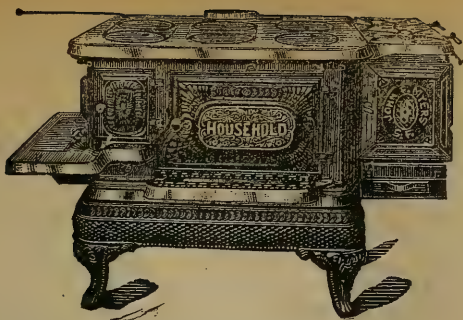
F. A. Wheeler, the well-known tea and coffee importer, when questioned in regard to the effects of the railroad-steamship combination upon the coffee trade of San Francisco, stated that the coffee market was not as disastrously affected as the tea trade. The reason was because the railway people had to meet competition from New Orleans and New York. A great deal of coffee from Central America comes into the United States through New Orleans and large shipments of Santos coffee from Brazil were consigned to New York. They therefore had to make a rate for the coffee that came into San Francisco which enabled our importers to control in some degree their own market. "What puzzles me," added Mr. Wheeler, "is that the railway people can haul 100 pounds of sugar from the Pacific Coast to Missouri River points for 65 cents while they charge \$1 55 for 100 pounds of tea."

THE CALL INDORSED.

Among other merchants visited, who had words of approval of the course of THE CALL, were J. A. Folger & Co. These gentlemen stated that they had no complaint to make in regard to the freight charges on coffee. The tea trade was the principal sufferer, and there was no profit to-day in handling tea in San Francisco. All branches of business were, however, seriously affected in San Francisco by the heavy freight charges.

Frank Johnson, of the Johnson-Locke Mercantile Company, said THE CALL was doing splendidly in the fight for the commercial emancipation of San Francisco. It was, he said, doing the best work of any paper in the city.

Mr. Haas, of Haas Brothers, spoke to the same effect.



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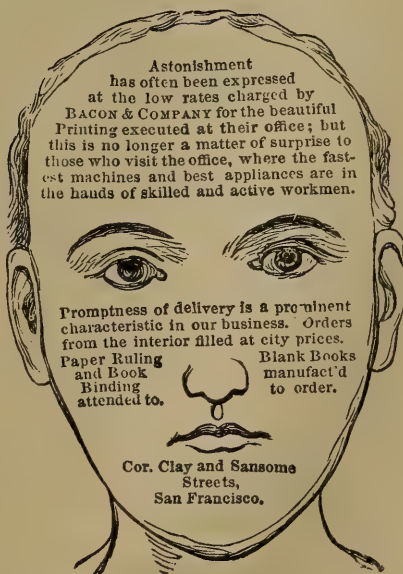
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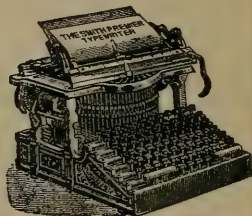
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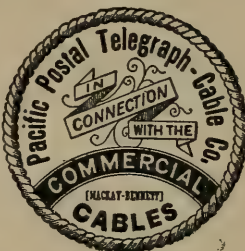


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Sliced Pears.....	20 " "	Evaporated Nectarines.....	15 " "
Tamarinds.....	20 " "	Raspberries.....	30 " "

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THE RIGHT OF THE RAILROAD
TO REASONABLE RATES.

BY GERRIT L. LANSING.



THE RIGHT OF THE RAILROAD TO REASONABLE RATES.

BY GERRIT L. LANSING.

THE RIGHT OF THE RAILROAD TO REASONABLE RATES.

This paper was read before the Chit-Chat Club of San Francisco, on December 11, 1893.

By decisions of the courts rendered during recent years, the relations in this country between the railroads and the State have undergone a most important change. I purpose reviewing briefly the character of these relations for a period of the past twenty years, particularly as to regulations affecting rates, and to note the significance of certain adjudication which must materially alter the attitude of the roads before the law.

THE GRANGER CASES.

The power of the Legislature to fix the rates of railroad transportation was first directly considered by the highest court of our country, in what is known as the Granger Cases, decided in 1876. The first of these, in which the main principle involved was fully considered, was that of *Munn vs. Illinois* (94 U. S., 113). The Legislature of Illinois had passed an act to regulate and fix the charges for the storage of grain in warehouses. Munn & Scott were proprietors of a warehouse in Chicago, known as the Northwestern Elevator, and were engaged in the business of storing grain. They had, in some respects, failed to comply with the requirements of the act, and in particular had charged higher rates for storing and handling grain than those fixed by the statute. They were indicted for violation of the law, were found guilty and fined by the County Court, and the judgment was affirmed by the

Supreme Court of the State. On appeal to the Supreme Court of the United States, the plaintiffs claimed that the statute was repugnant to the Constitution of the United States in several particulars, and especially that it was in violation of the 14th Amendment, which ordains that no State shall deprive any person of life, liberty or property without due process of law, nor deny to any person within its jurisdiction the equal protection of the laws. The main question considered by the Court was that of the power of the Legislature to fix the rates to be charged for the use of private property. It held that by virtue of the warehouse business being affected with a public use, it became subject to legislative control of rates as well as to other regulation for the public benefit. That this follows from the fundamental powers of government inherent in every sovereignty, to provide laws requiring each person so to conduct himself, and to use his own property, as not to infringe the equal freedom or property rights of others. That it is the police power of regulation under which "Congress, in 1820, conferred power upon the city of Washington to regulate the rates of wharfage at private wharves, the sweeping of chimneys, and to fix the rates of fees therefor, and the weight and quality of bread." "It was not supposed," the Court continues, "that statutes regulating the use, or even the price of the use, of private property, necessarily deprived an owner of his property without due process of law. Under some circumstances they may, but not under all" (p. 125).

After quoting then a number of expounders of the English common law, "because, as we think, we find in them the principle which supports the legislation we are now examining," the Court lays down this rule: "When private property is devoted to a public use, it is subject to public regulation." It then concludes that under

h is category grain elevators in Chicago must be included. This conclusion has been frequently reaffirmed in subsequent opinions of the Court, and stands unquestioned as the law upon this point.

The vital question affecting property rights which this involves is *the limit of the legislative power of regulation*. If this is to be fixed by reasonableness, so that rates will afford the usual profits to "property devoted to a public use," and at the same time protect the public from rates which are unjust,—from extortion or unjust discrimination; and if the fact of reasonableness or unreasonableness may, in each case, be determined as are other facts affecting property rights, by due process of law,—by the courts of justice,—then the regulation may be expected to further the end for which it was authorized. It will prevent the use of such property by its owners to the injury of the property rights of others. If the legislative regulation as to rates is without limitation it will, as other regulation under the police power of the State has in the past repeatedly done, produce what it was intended to prevent,—injustice. Public regulation for the public use may then deny such property the equal protection of the laws, and under the form of regulation may effect its confiscation.

It has since been said, that in the consideration of this case the question of limitation was not necessary and was not involved in the judicial judgment. But while this may be entirely true, it is also true that the question was distinctly considered, and the principle was generally supposed to be clearly and definitely determined in the opinion rendered by the Court.

After its conclusion that the Legislature has the power of regulation, the Court continued : " It has been insisted, " however, that the owner of property is entitled to reasonable compensation for its use, even though it be clothed

“ with a public interest, and that what is reasonable is a
 “ judicial and not a legislative question.” This proposition is considered at some length. The common-law rule that regulation must be reasonable is explained as being itself a form of regulation, which may be changed by statute. “ The controlling fact is the power to regulate at
 “ all. If that exists, the right to establish the maximum
 “ charge as one of the means of regulation is implied.” And the question is concluded with the following paragraph :

“ We know this is a power which may be abused ; but
 “ that is no argument against its existence. For protection against abuse by legislatures the people must resort
 “ to the polls, not to the courts ” (p. 134).

A dissenting opinion was filed by Mr. Justice Field, in which Mr. Justice Strong concurred. They held that the 14th Amendment should be given a broader construction than it had received in the opinion of the Court. That it was intended as a protection against the violation by the Legislature, in the form of laws, of the great natural rights of life, liberty and property ; that “ all that is beneficial in
 “ property arises from its use and the fruits of that
 “ use, and that whatever deprives a person of them
 “ deprives him of all that is valuable or desirable in the
 “ title and possession. If the constitutional guaranty
 “ extends no further than to prevent a deprivation of title
 “ and possession, and allows a deprivation of use and the
 “ fruits of that use, it does not merit the encomiums it has
 “ received.” Referring to the opinion of the Court, they state : “ The will of the Legislature is made the condition
 “ upon which the owner shall receive the fruits of his
 “ property, and the just reward of his labor, industry and
 “ enterprise. ‘ That government,’ says Story, ‘ can
 “ ‘ scarcely be deemed to be free where the rights of the

“ ‘ property are left solely dependent upon the will of a
 “ ‘ legislative body without any restraint.’ ” And, they
 add : “ The decision of the Court in this case gives unre-
 “ strained license to the legislative will.” They conclude
 that such regulation of private property may be legiti-
 mately exercised by State authority as may be necessary in
 the protection of the rights of others, and will secure to all
 the equal use and enjoyment of their own.

The plaintiffs in this case were private persons, owning a
 warehouse and engaged in the business of handling and
 storing grain. They had no State or other public franchise,
 and the warehouse was subject to the identical conditions
 that applied to any other private business. The plea for
 the regulation of charges by the State was that the article
 chiefly stored was wheat, from which was manufactured
 bread, the staff of life. The business was thus affected
 with a public interest. But, as this public interest was in
 the public use of bread, the baker becomes subject to the
 same legislative regulation as to the price of his loaves.
 The use of the police power to fix by law the prices of
 things affected with a public use is a return to the mis-
 guided legislation of the past, when attempts were made to
 fix the price of bread and of other commodities of common
 consumption. The application of this rule to railroads
 was not based on the plea that they were owned by cor-
 porations, the creatures of law, and operating under
 authority of a franchise granted by the State. Railroad
 rates were declared subject to unrestricted legislative con-
 trol solely because transportation is affected with a public
 use. That is indeed the true and natural reason why such
 regulation as is legal may be exercised by the State. If
 the rates are unjust it is the proper province of the State
 to provide such regulation as will remedy the injustice ;
 but if, in the effort to prevent injustice to the shipper, it

fixes rates which are unjust to the carrier, it defeats the most important end for which government is established.

The principles laid down in the elevator case were in the same term of the court applied, in several cases, to railroads. In one of these (*Peik vs. C. & N. W. Ry. Co.*, 94 U. S., 178) the unlimited power of the legislative will was emphasized as follows: "As to the claim that the courts must decide what is reasonable, and not the Legislature: This is not new to this case. It has been fully considered in *Munn vs. Ills.* Where property has been clothed with a public interest, the Legislature may fix a limit to that which shall in law be reasonable for its use. This limit binds the courts as well as the people. If it has been improperly fixed, the Legislature, not the courts, must be appealed to for the change."

To the opinions of the Court in these railroad cases also Justices Field and Strong dissented, and reviewing them together state: "The doctrine advanced in *Munn vs. Ills.* has been applied to all railroad companies and their business, and they are thus practically placed at the mercy of the Legislature in every State" (p. 185). These decisions established the legality of rates, just or unjust, which had been fixed by the Granger legislation in Illinois, Wisconsin, Iowa and Minnesota. This legislation was enacted in entire disregard of any rights which were claimed by the railroad companies for their property; but the results were found to be controlled by a higher law than that recognized by the courts. They are thus summarized by Prof. Hadley of Yale College: "The laws of trade could not be violated with impunity. The effects were most sharply felt in Wisconsin. The law reducing railroad rates to the basis which competitive points enjoyed left nothing to pay fixed charges. In the second year of its operation no Wisconsin road paid a dividend;

“ only four paid interest on their bonds. Railroad construction had come to a standstill. Even the facilities on existing roads could not be kept up. Foreign capital refused to invest in Wisconsin; the development of the State was sharply checked ; the very men who had most favored the law found themselves heavy losers. These points were plain to every one. They formed the theme of the Governor’s message at the beginning of 1876. The very men who passed the law in 1874 hurriedly repealed it after two years’ trial. In other States they were repealed, as in Iowa, or were sparingly and cautiously enforced. By the time the Supreme Court published the Granger decisions, the fight had been settled, not by constitutional limitations, but by industrial ones” (R. R. Transportation, p. 135).

THE MINNESOTA CASE.

The Railroad Commissioner of Minnesota describes this period as one “ when railroad enterprise was paralyzed and the general prosperity of the State at a low ebb.” And, he continues : “ After an almost total suspension of railway construction in the Western and Northwestern States for three years (1874-76), Minnesota was the first to resume building roads, and kept in the lead for several years, until we had substantially a complete system of trunk lines. There is to-day hardly a cultivated farm in the State from which the farmer cannot drive to a railroad station and return in a day. I believe that the avoidance of legislative interference with rates, and the administration of this office in a way to encourage the further investment of capital in railways in this State, has had an appreciable influence in this progress and development” (Report, 1881, p. 5).

But on return of prosperity to the State, the lesson of their experience was soon forgotten by the people, and agitation against the railroads led, in 1887, to an act of the Legislature providing for the establishment of a railroad and warehouse commission, with power to fix the rates for railroad transportation. The rates as fixed by this commission were contested by the railroads in the courts, but the interpretation of the law, affirmed by the Supreme Court of the State, made rates so fixed final and conclusive as to their being equal and reasonable, and that no judicial inquiry as to their fairness could be made.

This judgment was reviewed by the Supreme Court of the United States in the case of *C. M. & St. P. Ry. vs. Minn.* (134 U. S., 418). The Court, in its opinion, states :
 “ The Minnesota Court declares that it is the expressed intention of the Legislature of Minnesota, by the statute,
 “ that the rates recommended and published by the Commission * * * are the only ones that are lawful,
 “ and therefore, in contemplation of the law, the only ones
 “ which are equal and reasonable ; and that, in proceeding for a mandamus under the statute, there is no fact
 “ to traverse except the violation of the law in not complying with the recommendation of the commission.
 “ In other words, although the railroad company is forbidden to establish rates that are not equal and reasonable, there is no power in the courts to stay the hand of
 “ the commission if it chooses to establish rates that are
 “ unequal and unreasonable.

“ This being the construction of the statute by which
 “ we are bound in considering the present case, we are of
 “ opinion that, so construed, it conflicts with the Constitution of the United States in the particulars complained
 “ of by the railroad company. It deprives the company
 “ of its right to a judicial investigation by due process of
 “ law, under the forms and with the machinery provided

" by the wisdom of successive ages, for the investigation
 " judicially of the truth of the matter in controversy ;
 " and substitutes therefor, as an absolute finality, the
 " action of a railroad commission, which, in view of the
 " powers conceded to it by the State court, cannot be
 " regarded as clothed with judicial functions or possess-
 " ing the machinery of a court of justice. * * * * *
 " The question of the reasonableness of a rate of charge
 " for transportation by a railroad company, involving, as
 " it does, the element of reasonableness, both as regards
 " the company and as regards the public, is eminently a
 " question for judicial investigation, requiring due process
 " of law for its determination. If the company is deprived
 " of the power of charging reasonable rates for the use of
 " its property, and such deprivation takes place in the
 " absence of an investigation by judicial machinery, it is
 " deprived of the lawful use of its property, and thus, in
 " substance and effect of the property itself, without due
 " process of law, and in violation of the Constitution of
 " the United States ; and in so far as it is thus deprived,
 " while other persons are permitted to receive reasonable
 " profits upon their invested capital, the company is
 " deprived of the equal protection of the laws."

This opinion was rendered in 1890. By the principles
 which it thus declares, property affected with a public use
 is, for the first time since the Granger cases were decided,
 clearly recognized to have the right, equal with other
 forms of property, to the protection of the Constitution
 and the courts. The judgment was concurred in by Jus-
 tice Field, the only survivor of those who dissented in the
 Granger cases. Justices Bradley, Gray and Lamar dis-
 sented, saying that " It practically overrules *Munn* vs.
 " *Illinois* and the several railroad cases that were decided
 " at the same time. The governing principle of these

“cases was that the regulation and settlement of the fares of railroads and other public accommodations is a legislative prerogative, and not a judicial one.”

No attempt was afterward made to enforce the Minnesota statute, and it was subsequently repealed.

THE TEXAS CASE.

A year after the decision was rendered in the Minnesota case, the Legislature of Texas passed an act providing for the establishment of a railroad commission, giving it full power to prescribe rates, charges, regulations and classifications for the railroads of that State (Act of April 3, 1891). The framers of this law kept steadily before them for their guidance the decision in the Minnesota case, and attempted by conforming to the letter of its text to avoid the direction of its principles. They acknowledged in the act the right of the railroad to a reasonable rate, and that its property must be allowed the equal protection of the laws. They then provided that the rates fixed by the commission should be conclusively reasonable, and that, in a suit for penalties for their violation, the question of reasonableness could not be raised by the railroad in its defense.

For each violation of the Commissioners' rates the railroads are made liable to private persons by the act, not only for damages but for penalties also. And section 5 provides that, in all actions between private parties and railroad companies, the rates, regulations and classifications prescribed by the commission shall be held *conclusive*, and deemed and accepted to be reasonable, fair and just and in such respects shall not be controverted therein until finally found otherwise in a direct action brought for that purpose as prescribed by sections 6 and 7. These sections then provide that, if a railroad is dissatisfied with

any rate or regulation prescribed by the commission, it may file a petition in a court in Tevis County, Texas, setting forth the causes of objection. And in all such trials the plaintiff must show by clear and satisfactory evidence that the rates, regulations and charges complained of are unreasonable and unjust to them.

The purpose of section 5 was manifestly, by denying to the railroad the right to have heard and tried in its defense the reasonableness and therefore lawfulness of the Commissioners' rates, to enforce compliance with the rates, whether just or unjust, by threat of the penalties, the only fact to prove for judgment against the railroad being that it had not accepted the Commissioners' rate. If the rate is not accepted the penalties are inevitable. If it is accepted, and in direct suit under sections 6 and 7 it should finally be declared unreasonable, the railroad has no remedy for the wrong it has received in having the unreasonable rate imposed upon it. Of such a rule of procedure Judge Cooley, in his *Principles of Constitutional Law*, has stated: "A statute which should undertake to
" establish conclusive rules of evidence, whereby a party
" might be excluded from any opportunity to show the
" facts on the affirmative presentation of his adversary's
" case, would be nothing short of a statute of confiscation,
" and manifestly in violation of constitutional rights " (p. 329).

That rates, which in direct action subsequently brought and finally decided by the courts to be unreasonable and void, might still be claimed when issued by the commission as conclusively reasonable, fair and just; the commission was directed to hear the railroads in their own behalf, and to give them ten days' notice of the time and place when and where the rates were to be fixed. This was supposed to provide "an investigation by judicial
" machinery," and to determine the reasonableness of the

rates by "due process of law." The first investigation of this kind held under the law was called by a circular, dated June 20, 1891, issued by the newly appointed Commissioners, to the railways of the State. The notice announced that, pursuant to the requirements of the law, the commission would, on July 6, 1891, begin and continue from day to day, until completed, the fixing of freight rates on all property that may be transported on the railways of the State. And attention was called to that section of the act "which provides that, in all cases where the rates shall not have been fixed by the commission, no changes shall be made except after ten days' notice and consent of the commission."

At the date named, representatives of most if not all of the roads in Texas appeared before the commission in Austin. No proposed change or issue as to rates or classification was submitted, and the commission themselves afterwards stated that, at the date of the conference, they "had just begun the investigation of the classification and rates of said roads in the State, and had not determined either upon any classification or rates" (51 Fed. Rep., 541). This assize has been described, by one who was present, as a sort of general experience meeting, and by another as a kind of Chautauqua class, where free lectures on the general subject of railway freights, classification and rates were invited from all comers, which could result in nothing, unless a Babel, with its confusion of tongues. And the commission have said that "the said conference, beginning on July 6, 1891, lasted for several days, and all freight rates in Texas were discussed and considered." Following this, and without further hearing or the investigation as to any particular rates or charges, they proceeded to prescribe rates from time to time and put them in force.

As a relief from the effect of these rates and tariffs prescribed by the commission, suit was brought in the U. S. Circuit Court by the mortgage trustees of some unprofitable railways, praying that the commission be enjoined from putting the tariffs, circulars or orders into effect, and from making and delivering others to the railways. (Decided by A. P. McCormick, Circuit Judge, Fifth Circuit, at Dallas, August 22, 1892. 51 Fed. Rep., 529.)

As to the investigation held by the commission before fixing the rates and classifications, the Court held: "The suggestion that the proceedings constitute 'due process' 'of law' within the meaning of the provisions of the Constitution, or 'an investigation by judicial machinery' within the meaning of the decisions of the Supreme Court, can hardly be seriously made by the sound lawyers who have appeared to resist these motions. And the subject is too grave for jest."

As to the rates thus fixed by the commission being deemed conclusively fair and reasonable, and the railroad being denied the right to controvert them in suits brought by private parties, the Court quoted the principles laid down in the Minnesota case,—that the question of reasonableness "is eminently a question for judicial investigation, requiring due process of law for its determination." It then continues: "It must be conceded that, as between private parties and the railways, no such investigation of the reasonableness of rates is permitted by the railroad commission law of Texas, for that intent is expressed in section 5 in terms too comprehensive and plain to be modified by construction."

Considering then other provisions of the act, and finally the effort made by severe penalties to constrain the roads "to submit to whatever rates the commission might

“impose, until, by a new patent process, the roads could recover the right to hold up the shield of the Constitution against unreasonable rates,” the Court concludes : “It clearly appears to me that every provision of this law that thus tends to enforce a compliance with the rates of the commission, whether they be reasonable or not, and every provision tending to embarrass, or enabling the commission to embarrass, such roads as may choose to invoke the protection of the Constitution against the taking of their property without due process of law, or denying them the equal protection of the law, is affected with the same vice that renders section 5 invalid.”

It was then ordered that the commission be restrained from issuing further tariffs, and that all other individuals be restrained from instituting any suits against the railways for overcharges, damages or penalties, under this act, or by virtue of the tariffs or orders of the commission.

This case is now on appeal to the United States Supreme Court. There can be no doubt that in all essential points it will be affirmed, for it is based on fundamental principles of justice. The Court, referring to the authority for its opinion, states : “The vital question involved has, from the 15th day of June, 1215 (we need not go beyond that date), engaged the supreme attention of the English-speaking people. The principle underlying it is the bedrock of our civilization, older and stronger than our written constitutions, state or national, but well expressed in both.”

As the Legislature represents the people, of whom the owners of railroads form a part, it has been commonly believed that rates fixed by the Legislature would be reasonable and just. But the error of this assumption has been shown in the Granger, Minnesota and the Texas laws, together with other unjust acts from which property has

had to seek the protection of the courts. Indeed, the whole history of legislation affords frequent illustrations of this result. Property of certain kinds, or that owned by certain classes, has been commonly subjected to the imposition of unjust laws. Legislatures, no less than men, controlled by motives of supposed expediency, are blinded to the rule of justice. Governed, at times, by passing sentiment or passion, they are led to disregard the equal rights of persons and of property. The prevalence of this tendency in democratic governments has been the principle basis for apprehensive predictions, made by the critics of our country and its institutions.

But the founders of this government were not socialists or visionaries. While maintaining the sovereignty of the people, they recognized the dangers as well as the benefits of such a government, and felt the necessity of prescribing a limit to the power of the people. Believing in original sin, they knew the need of man for protection against himself. The written Constitution was devised to furnish that protection. By it, it is provided that certain common rights are not to be infringed by acts of Congress or the Legislature of any State. Thus, by the Fifth Amendment, it was ordained that "No person shall be deprived of
" life, liberty or property without due process of law." This was a limitation upon the power of Congress. By the Fourteenth Amendment the following restriction was placed upon the legislatures of the States: "Nor shall
" any State deprive any person of life, liberty or property
" without due process of law, nor deny to any person
" within its jurisdiction the equal protection of the laws." Thus twice in the Constitution are the rights of property placed on equal terms with liberty and life. The full enforcement of these provisions by the courts will extend to all forms of property equal and just protection from legislative spoliation.

CHANGED ATTITUDE OF THE STATE TOWARD THE RAIL-
ROADS.

This radical change in the attitude of the State toward the railroads effects a most important change in the status of the companies. For protection against wrongs inflicted by the Legislature, or its agent, a commission, in fixing rates, they are no longer told that they "must resort to the polls," or that "the Legislature must be appealed to for the change," but they are now allowed an appeal to the impartial judgment of the courts. A certain class of politicians, and the press, who aim by misrepresentations and attacks upon capital and corporations to extend their influence among the masses, or who try, by threats, to sell their silence or their services, are now deprived of their chief power to harm. Their favors being no longer required for security, no fear need be apprehended from their threats. The business of railroad transportation being legitimate, there is required for its full prosperity only justice. This it can now demand. The railroads, no longer forced into politics for protection, will find their true security in keeping out, the honest and reasonable conduct of their own business being their best defense. Under the protection now of the Constitution and the courts, the railroads having the recognized right to remunerative rates, legislative action will be limited to securing rates which are reasonable. This is, in fact, the natural limit to its power. The authority for regulation by the State, as has been clearly defined by the Supreme Court in the *Munn* case, rests upon the police power, inherent in all sovereignty. This power is for the equal protection of life, liberty and property. It is rightly exercised only in securing these, and, to that end, in preventing the use by one, or any number, of their liberties or property, to the infringement of the equal freedom or property rights of

others. The authority, and thus the limits, of this power of regulation is the securing of justice.

Instead, therefore, of attempting to make tariffs and classifications which may be made void by the courts, the Legislature will wisely confine its action as to rates to the prevention of unjust discrimination. This course, as our history has repeatedly shown, will doubtless result in the greatest good, both to the people and the owners of the property.

But it is often contended that the railroad is a monopoly; that its rates are not subject to the ordinary influences of competition, and if not fixed by law, but dictated only by the self-interests of the owners, would be excessive and unreasonable; and particularly has this been claimed as the natural result in this country, where the roads are owned by private corporations, and not, as in some other countries, by the government. A closer consideration, however, of the causes which, above the power either of the government or the company, actually control the rates, and a review of the results which, under that control, have been accomplished, will demonstrate that competition has here as full effect as on the prices of any commodities of trade, and that the fears of monopoly rates are in fact without foundation.

Railroad rates are from their nature, to a great degree, based on discriminations. And the same conditions which cause discriminations produce also the reductions which are daily made. These are the natural forces which, under varied forms of competition, work always to reduce the rates of railways, like the prices of all commodities, to a minimum. They may be briefly summarized as follows: Competition with other lines of transportation, as water routes and other railways; the reductions required to carry to market commodities from new places of production, and

to extend the trade of existing industries to new and distant markets; the effort by lower rates on things consumed in large quantities, to increase the traffic to an amount that will yield larger net profits; and, as a common and universal force, the competition of capital, which prevents a railroad, the conditions of risk being equal, from earning long a larger profit than is earned on capital invested in other forms of property. It is a generally conceded fact that free competition in the commodities of commerce is of sufficient force to reduce their prices to the lowest rates that are practicable with any profit, and therefore the lowest possible; and no suggestion in our generation is made that such prices should be fixed by law. Yet, measured by this standard, it will be found that the forces of competition, affecting railroads, have caused greater reductions in rates than has been effected by the commonly recognized competition in the prices of any class of commodities.

ILLUSTRATIONS OF REDUCTIONS IN PRICES AND RATES.

In the recent controversy regarding silver, attention was frequently called to the fact that prices of all commodities have, during the past twenty years, been subject to great reductions; and that silver during the same period has suffered a similar decline; has led to the plea by its advocates that what has happened has not been that silver and commodities in general have fallen in price, but that gold, the standard by which the prices are compared, has risen. The theory of the silver men will find scant support in a detailed examination of the facts; but the general reductions to which attention has been called suggest the period of twenty years, from 1873 to 1892, for a comparison of the reductions in railroad rates with the prices of commodities.

Comprehensive data for such a comparison has recently been made available in the report on Wholesale Prices,

Wages and Transportation, submitted to the United States Senate by the Committee on Finance, on March 3, 1893. The committee states, that "the tables and statements submitted furnish a body of statistics upon these important subjects, more comprehensive and satisfactory, it is believed, than any heretofore collected." The report furnishes relative prices annually, from 1840 to 1891 inclusive, thus allowing a comparison to be made for any period with any given year. From this report the relative prices and wages in the accompanying tables are taken.

The returns for all railroads of the United States are not available for the whole period under review. The earliest year since which these have been consecutively compiled is 1882. A typical group of lines has been taken for the entire period since 1873, which comprises the ten principal railway systems east of the Missouri and Mississippi rivers. This group operated, in 1892, 19,463 miles of road.

To show that these do not give an extreme view of the general rule of reductions in rates, a further illustration is given in the Pacific System of the Southern Pacific Company. This is the principal railway system on the Pacific Coast, and included, in 1892, 4,736 miles of road. Owing to the great mountain divisions on each of its three trunk lines, the large extent of desert country which it serves in Utah, Nevada, Arizona and New Mexico, and the general absence in such places of local competition, this system, so far as the commonly recognized forces of competition are concerned, presents undoubtedly an extreme case. Yet here it will be seen that the natural forces in effect have caused even greater reductions in rates during the twenty years than has occurred on the eastern group of lines.

The figures used in the following tables of relative prices of commodities and wages, of railway rates and the value of silver, are shown comparatively for each of the twenty years on the accompanying diagram.

RELATIVE PRICES, COMPARED WITH 1873, OF COMMODITIES AND WAGES.—IN GOLD.

YEARS.	NINE PRINCIPAL AGRICULTURAL PRODUCTS.		WHEAT.		FOOD.		CLOTHING.		ALL (223) ARTICLES.		WAGES, 543 OCCUPATIONS.	
	Prices.	Dec., per cent.	Prices.	Dec., per cent.	Prices.	Dec., per cent.	Prices.	Dec., per cent.	Prices.	Dec., per cent.	Rates.	Dec., per cent.
1873	100.0	—	100.0	—	100.0	—	100.0	—	100.0	—	100.0	—
1874	116.5	—	94.4	5.6	103.3	—	93.3	6.7	101.8	—	99.0	1.0
1875	112.1	—	73.4	26.6	102.7	—	88.2	11.8	100.1	—	95.2	4.8
1876	86.7	13.3	77.6	22.4	99.1	.9	81.5	18.5	94.9	5.1	91.0	9.0
1877	91.0	9.0	95.4	4.6	99.7	.3	83.9	16.1	93.5	6.5	91.8	8.2
1878	84.6	15.4	90.9	9.1	96.6	3.4	81.9	18.1	90.1	9.9	94.3	5.7
1879	85.9	14.1	72.8	27.2	85.9	14.1	78.6	21.4	82.9	17.1	94.6	5.4
1880	97.1	2.9	97.1	2.9	95.4	4.6	85.5	14.5	91.6	8.4	97.0	3.0
1881	110.5	—	80.7	19.3	100.6	—	81.9	18.1	94.6	5.4	102.2	—
1882	113.2	—	100.4	—	101.9	—	81.3	18.7	95.2	4.8	103.7	—
1883	96.2	3.8	76.8	23.2	98.6	1.4	78.5	21.5	93.1	6.9	108.0	—
1884	95.1	4.9	72.2	27.8	95.4	4.6	75.8	24.2	89.6	10.4	105.2	—
1885	82.9	17.1	61.5	38.5	84.9	15.1	73.3	26.7	81.5	18.5	105.1	—
1886	82.5	17.5	64.0	36.0	85.7	14.3	73.1	26.9	81.6	18.4	105.0	—
1887	84.5	15.5	63.7	36.3	87.2	12.8	73.2	26.8	82.5	17.5	106.2	—
1888	88.3	11.7	61.4	38.6	89.3	10.7	72.1	27.9	84.0	16.0	107.1	—
1889	81.6	18.4	74.4	25.6	92.4	7.6	71.7	28.3	86.0	14.0	110.5	—
1890	88.3	11.7	61.2	38.8	86.6	13.4	70.2	29.8	81.8	18.2	114.1	—
1891	92.8	7.2	75.9	24.1	87.7	12.3	70.2	29.8	82.5	17.5	114.4	—

RAILWAY FREIGHT AND PASSENGER RATES, AND VALUE OF SILVER,—IN GOLD.

YEARS.	AVERAGE FREIGHT RATE PER TON PER MILE.				AVERAGE RATE PER PASSENGER PER MILE.				GOLD VALUE OF A SILVER DOLLAR.
	EASTERN SYSTEMS.		PACIFIC SYSTEM.		EASTERN SYSTEMS.		PACIFIC SYSTEM.		
	Rate, in cents.	Decrease, per cent.	Rate, in cents.	Decrease, per cent.	Rate, in cents.	Decrease, per cent.	Rate, in cents.	Decrease, per cent.	
1873	1.38	—	3.51	—	2.19	—	3.52	—	1.004
1874	1.35	2.2	3.17	9.7	2.29	—	3.40	3.4	.988
1875	1.12	18.9	3.17	9.7	2.14	2.3	3.09	12.3	.964
1876	.95	31.2	3.11	11.4	1.92	12.4	3.13	11.1	.894
1877	1.05	23.9	3.14	10.6	2.24	—	3.02	14.2	.929
1878	.99	28.3	3.17	9.7	2.27	—	3.01	14.5	.891
1879	.91	34.1	2.74	21.9	2.31	—	2.80	20.5	.868
1880	.98	29.0	2.68	23.7	2.23	—	3.16	10.3	.886
1881	.92	33.4	2.50	28.8	2.13	2.8	3.20	9.1	.881
1882	.93	32.6	2.06	41.3	2.19	—	3.07	12.8	.878
1883	.99	28.3	2.16	38.5	2.27	—	2.85	19.1	.858
1884	.89	35.5	2.24	36.2	2.19	—	2.77	21.3	.861
1885	.81	41.3	2.04	41.9	1.95	11.0	2.57	27.0	.823
1886	.85	38.4	1.56	55.5	2.14	2.3	2.10	40.4	.769
1887	.83	39.9	1.72	51.0	2.12	3.2	2.21	37.3	.758
1888	.79	42.8	1.93	45.0	2.09	4.6	2.21	37.3	.727
1889	.77	44.2	1.99	43.3	2.05	6.4	2.16	38.7	.724
1890	.76	45.0	1.85	47.3	2.06	6.0	2.15	39.0	.809
1891	.78	43.5	1.84	47.6	2.06	6.0	2.16	38.7	.764
1892	.75	45.7	1.81	48.5	2.03	7.3	2.14	39.2	.674

In 1873 the intrinsic or market value of silver in a silver dollar was almost exactly the same as the value of gold in a gold dollar. From this year the value of silver declined as shown from year to year, till in 1892 it had reached the price of 67.4 cents, a reduction in the twenty years of 33 per cent. To make a similar comparison of prices, wages and railway rates, they are stated relatively in each year to what they were in 1873.

The nine principal agricultural products show an average reduction of 7.2 per cent. These include meats, corn, wheat, cotton, oats, tobacco, barley, rye and hemp. The value of the product of each is in the order named, the total exceeding \$2,500,000,000. The average rate is found by considering the importance of the production of each as well as the relative price. The percentage of decrease thus represents the actual value of the reduction compared with the total value of the nine products. But some of the products have increased in price while others have decreased much more than the rate shown for the whole. The average result would therefore be misleading if applied to any single product. As an illustration of a product affecting more people both in its production and consumption than any other article, the annual fluctuations in the price of wheat is given, the reduction for the period being 24.1 per cent.

The average reduction in the price of food is 12.3 per cent. This includes flour, meat, fish, vegetables, fruit, sugar, molasses, spices, bread, butter, eggs, etc. The relative prices are measured in proportion to their importance, based on the consumption by a normal family of the different articles. The percentage of decrease thus represents the average value of the reduction compared with the consumption of food by a normal American family.

Percentages:

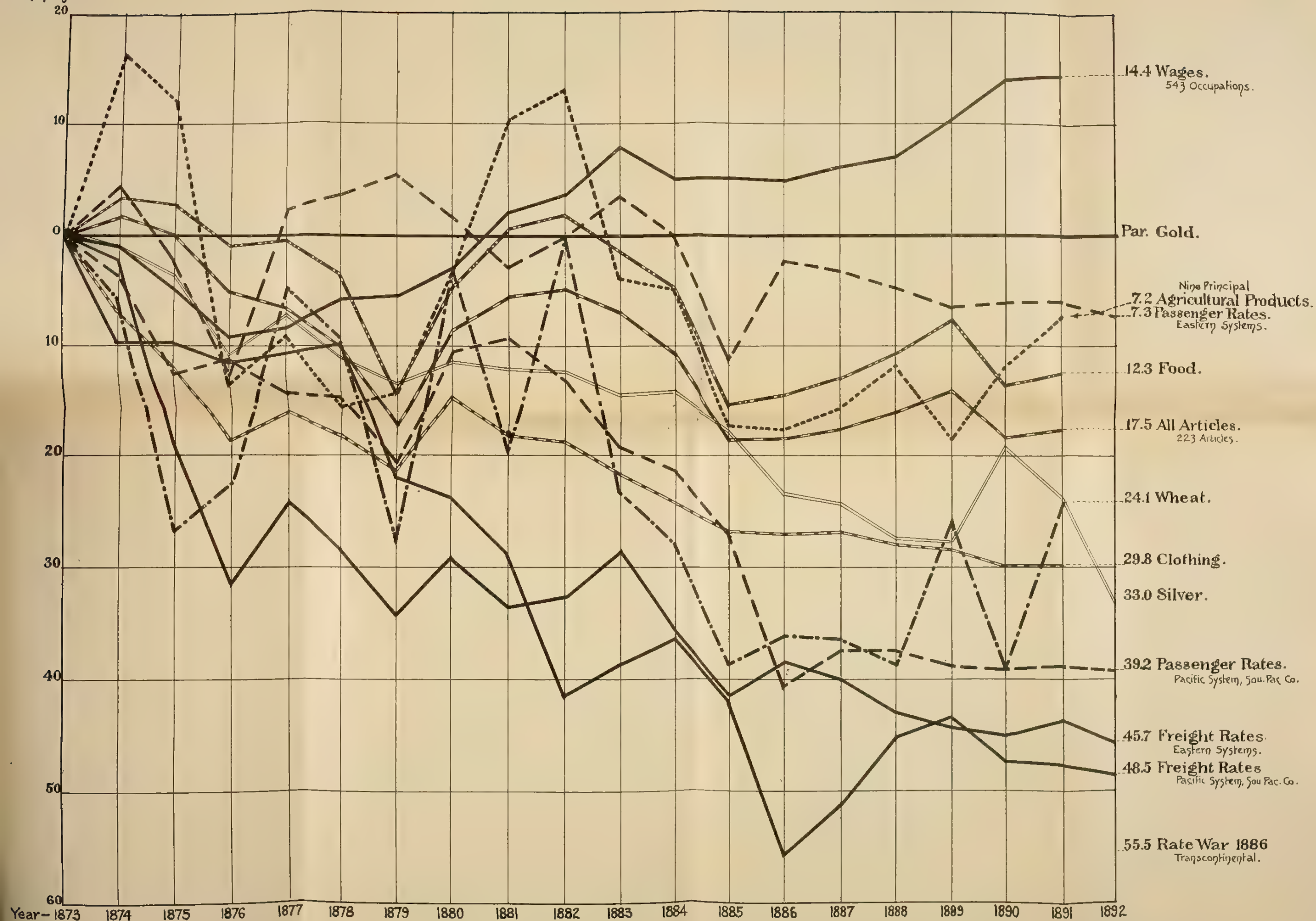


Diagram showing the relative reductions in Prices and Railway Rates, and the increase in Wages. For the 20 years from 1873 to 1892.

Authorities:—**PRICES and WAGES:** Report of U.S. Senate Committee on Finance, March 3, 1893, No. 1394 on Wholesale Prices, Wages and Transportation Volume 1. **SILVER:** Report of Director of U.S. Mint on Production of the Precious metals, for the year 1892, p. 30. **RAILWAY RATES:** Eastern Systems include 10 principal Systems east of the Missouri and Mississippi rivers, 19,463 miles in 1892, Pacific System, Southern Pacific Company, is the principal system on the Pacific Coast, 4,736 miles in 1892, compiled from Poor's Manual and verified by annual reports of the companies and Reports of the Interstate Commerce Commission.

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Clothing shows a reduction of 29.8 per cent. This includes the clothing worn by a normal family, consisting chiefly, as to importance, of woolen and cotton goods, coats and shoes, hats, bonnets and underwear. The average rate of this is also found by considering the importance of each as well as its price, on the basis above applied to food. It will be noted that clothing shows a greater reduction than appears for any other group of articles. The explanation of this is apparently found in the greater use that has been made in its manufacture of labor-saving machinery.

There has been a reduction of 17.5 per cent in all articles. This includes practically all articles which affect the average consumer, consisting of 223 items. The relative average prices are, like those of food, based on the importance of consumption by a normal family. The decrease of 17.5 per cent thus shows the value of the reduction in the cost of living, for all articles of food, clothing and manufacture, to the average American family. Compared with this result the relative rates of wages are of special interest.

The average rate of wages shows an increase in the twenty years of 14.4 per cent. This represents the combined result for 543 occupations. The average rates are found by combining the amounts for all occupations, and considering also the relative importance of the rates for each industry, measured by the number of persons employed therein. The result thus shown is the average percentage of increase in the rate of pay received by all persons earning wages.

The rates of railroad transportation are shown to have followed the general rule of reduction common to the prices of commodities. The average rate per passenger per mile has on the Eastern systems decreased 7.3 per cent, and on

the Pacific system 39.2 per cent. The average rate per ton per mile for freight has decreased on the Eastern systems 45.7 per cent ; while on the Pacific system it has decreased 48.5 per cent. Thus, during the past twenty years, there has been greater aggregated reductions in railroad rates than in the prices of any class of commodities. If applied to the traffic carried by these eleven railroad systems in 1892, the reductions shown in passenger and freight rates as compared with 1873 would exceed the annual sum of \$173,000,000.

The prices in these tables are all stated on a gold basis of value. While this is the recognized standard of all the principal civilized nations, its fairness has recently been questioned by some, and silver has been suggested as a substitute. Without discussing the merits of this question, it is worthy of note, if only as a matter of curiosity, that, whatever basis of comparison be employed, the relative results shown by the diagram will practically remain unchanged, the rates being stated relatively. But as a dollar in gold in 1873 was of equal value with a silver dollar, and in 1892 was relatively worth \$1.48, a comparison of prices on a silver standard for these years will show a greater increase or decrease by the 48 per cent than is shown on the gold standard by the diagram. With silver as a basis of value then, we find that, compared with 1873, there has been an increase in wages of 70 per cent, in agricultural products of 37 per cent, and of 22 per cent in all articles. The only reduction in prices during the twenty years is in railroad rates, the greatest decrease being in freight rates of the Pacific system lines of 24 per cent.

Silver basis of value. Relative prices and rates for the years named, compared with 1873.

Items.	Years.	Relative rates in gold.	Relative rates in silver.	Per cent increase or decrease.
Silver	1892	67.4	100.0	Increase.
Gold	"	100.0	148.4	—
Wages	1891	114.4	169.7	48.4
Principal agricultural products	"	92.8	137.7	69.7
Passenger rates—Eastern systems .	1892	92.7	137.6	37.7
Food	1891	87.7	130.1	37.6
All articles	"	82.5	122.4	30.1
Wheat	"	75.9	112.7	22.4
Clothing	"	70.2	104.2	12.7
Passenger rates—Pacific system	1892	60.8	90.2	4.2
Freight rates—Eastern systems	"	54.3	80.5	Decrease.
Freight rates—Pacific system	"	51.5	76.4	9.8
				19.5
				23.6

The results thus justify the general belief that competition controls the prices of commodities, and not only affords protection from excessive rates but works continually to reduce them to a minimum. And they further illustrate the fact, not so generally understood, that forces of competition have an equal or even greater effect in reducing the rates on railways. It is deserving, too, of note, that on the Pacific system lines, where the usually recognized causes of competition are relatively rare, the percentage of reduction in freight rates is greater than in any other item on the list.

But in answer to this result it will be naturally observed that, notwithstanding the large reductions on the Pacific system lines, the average rate for freight, as shown by the accompanying table, is still much greater than on the Eastern systems. This will doubtless receive some explanation in the manifestly greater cost of operation of the roads having the higher rate. It has been already observed that the Pacific lines cross three great mountain

chains and many miles of desert. Through the States and Territories where they run also, wages, fuel, materials and supplies for operation and construction are much higher than along the Eastern lines. The two systems, in fact, afford contrasts in most respects. The Eastern lines have the least cost of service and the largest traffic, as well as the lowest rates of any group of roads in this or any other country. Their average rate of freight per ton per mile in 1892 of .75 of a cent is 25 per cent less than the average for all lines of the United States. Yet, notwithstanding the lowest average rate, the traffic on which it is collected is so great that the roads undoubtedly comprise, on the whole, the most profitable of American railway properties. A comparison between the two systems of the volume of traffic carried will alone show a sufficient cause for the difference in the rate of charge. This follows from the well-known fact that an increase in the traffic of a railroad is not accompanied by a relative increase in expense. It is in recognition of this rule that the companies are continually led to reduce their rates with a view of securing a sufficient increase of traffic to result in increased net earnings. The operation of this rule is recognized in all kinds of business, but affects with special force the business of transportation. A proportion of the expenses of a railroad, such as administration, supervision and taxes, are not affected directly by the volume of the traffic carried. The large necessary payments for maintaining the roadway, bridges structures and other property are affected by the traffic but in a slight degree; and the direct expense of transportation, which is the most affected, still is not increased nearly in proportion to the traffic carried by the road. As a result it will be always found, and the lines under consideration well illustrate this rule, that, other things equal, the roads

COMPARATIVE AVERAGE RAILWAY RATES, IN GOLD, AND VOLUME OF TRAFFIC, 1873 AND 1892.
OF TEN PRINCIPAL EASTERN SYSTEMS, WITH THE PACIFIC SYSTEM OF THE SOUTHERN PACIFIC COMPANY.

	Year.	Amounts.	Per cent.	0	100	200	300	400	500	600	700
Freight Rates. Average per ton per Mile.											
<i>Pacific System.</i>	1873	Cents 3.51	100.								
" "	1892	" 1.81	51.6								
<i>Eastern Systems</i>	1873	" 1.38	39.3								
" "	1892	" .75	21.4								
Freight Traffic. Average tons per Mile of Road.											
<i>Pacific System</i>	1873	166,428	100.								
" "	1892	235,682	141.6								
<i>Eastern Systems</i>	1873	704,290	423.2								
" "	1892	1,152,626	692.6								
Passenger Rates. Average per passenger per Mile.											
<i>Pacific System</i>	1873	Cents 3.52	100.								
" "	1892	" 2.14	60.8								
<i>Eastern Systems</i>	1873	" 2.19	62.2								
" "	1892	" 2.03	57.7								
Passenger Traffic. Average passengers per Mile of Road.											
<i>Pacific System</i>	1873	95,921	100.								
" "	1892	111,303	116.								
<i>Eastern Systems</i>	1873	158,258	165.								
" "	1892	176,305	183.8								

*Eastern Systems include: Boston and Albany; N.Y. N.H. and Hartford; N.Y. Cent. and H. River;
Lake Shore and M. S.; Penna. R.R.; Pitts. Ft. W. and Chicago; Wabash; Louisville and Nashville;
Chi. and No. W.; Illinois Cent. Road operated in 1892, 13,463, miles.*

with the lowest rates have also the largest traffic and net earnings.

A view of the volume of traffic compared with the average rates is furnished by the accompanying diagram. Reduced for comparison to the uniform basis of one mile of road, it will be seen that where the rates are least the traffic is greatest. And, as between the Eastern and the Pacific systems, the greater amount of traffic much more than offsets in each case the lower average rates. With passengers, in 1873 the average rate for the Eastern systems was less than for the Pacific system by 38 per cent, while their traffic was greater on the other hand by 65 per cent. In 1892 the average passenger rate for the Eastern lines was less by only 5 per cent, while their traffic was greater by 58 per cent.

For freight traffic the contrast is more striking. In 1873 the average rate per ton per mile for the Eastern systems was less than for the Pacific system by 61 per cent, while the volume of their traffic was 323 per cent greater. In 1892 the rate for the Eastern lines was less by 59 per cent, and their traffic was greater by 489 per cent.

A comparison of railroad rates in the United States with those of other countries will further show that here, under the influence of private ownership and operation, the rates are lower than exist in other countries, even where the roads are owned by the governments and the rates are supposed to be fixed entirely in the public interest. The average freight rate of the railways of Europe in 1883 was 2.02 cents per ton per mile; at the same time for the United States it was 1.22 cents. "In Holland, where," it is explained by an English writer, "owing to numerous " canals and rivers, rates are lower than anywhere else in " Europe, an average of 1.52 cents per ton is charged " (Van Oss, p. 83).

The following are the average freight rates for the different European countries for 1883 (Railway Problems, J. S. Jeans, London, 1887, p. 277) :

COUNTRIES.	Average Rate. Cents.
Germany.....	1.70
Austria.....	2.10
Belgium.....	1.54
Denmark	2.76
France.....	2.14
Italy.....	2.40
Luxembourg.....	1.92
Norway.....	3.00
Holland.....	1.52
Roumania.....	2.64
Russia.....	2.32
Finland.....	1.98
Switzerland.....	3.36
Average for all	2.02

This list does not include Great Britain, of which Mr. Jeans says : " So far as England is concerned, we have no
 " clue to the average ton rate, but on the great coal-carry-
 " ing lines, where the lowest rates are to be found, the
 " average ton-mile charge for the transport of *that mineral*
 " to the metropolis in full train-loads is as nearly as
 " possible identical with the average of the United States
 " railways for 1880, *as applied to all descriptions of traffic*.
 " It is possible that the average ton-mile rate on English
 " railways will not be much, if any, under 1 ½d. (3 cts.),
 " which is just three times the amount charged on the
 " principal American lines. If the assumed English
 " average were now charged on the American railways, the
 " income of the latter on the freight carried in 1884

“ would have been two hundred millions sterling (\$1,000,000,000) more than it really was ” (p. 320).

Another English writer, whose voluminous work contains no suspicion of a friendly bias for the railways of the United States, following a comparison of their rates, concludes: “ If we consider that owing to magnificent distances separating the agricultural centers from the densely populated east and the seaboard, the development of the country depended upon rates which in Europe would seem irreconcilable with the profitable working of a railway, it was very fortunate indeed that circumstances arose which gave the population of the United States the benefit of the lowest railway rates to be found on any continent. * * * Americans may congratulate themselves upon the fact that conditions were given birth which not only prevented the railways from making exorbitant charges, but which compelled them to reduce their rates to a level which astonished the world ” (*American Railways as Investments*, S. F. Van Oss, London, 1893, p. 83).

The exceptional conditions of operation which control the Pacific system lines are in general the same as those to which the railways of New South Wales are subject. Both are located in new and for the greater part in undeveloped territories. Materials and supplies for construction and operation must be furnished from distant markets, and labor in both places is equally high. The cost of operation measured by the average rate per mile run by trains is greater with the American than with the Australian roads. In 1891 the operating expenses per train mile on the Pacific system was \$1.31 compared with \$1.05 on the railways of New South Wales. The Government Railway Commission of New South Wales, in their report for the same year, state the average rate of freight per ton per mile at 3.31 cents. The Pacific

system rate was 1.84 cents. With conditions of operation here substantially the same, or with advantages at least not in favor of the lines with the lower rates, the rates regulated only by the natural forces of competition are less by 44 per cent than those fixed by the government.

The illustrations which have above been given are not selected or exceptional, but fairly represent the common rule. Their indefinite extension would but further demonstrate the same results. The reductions which have been made have followed from the operation of the railways in the interest of their owners. Controlled by natural forces of competition, rates, equally with the prices of all articles of trade, continually tend to the lowest point. The imposition of rates by legislative acts restrains the operation of the natural law, arrests the course of competition, and effects the same results as statutes fixing prices. But rates require, to prevent injustice, the constant exercise of judicious discrimination. This is necessary to secure the full development of trade and traffic, and the corresponding common benefit. A discrimination made in a rate means always a reduction, usually to encourage the movement of traffic of a certain kind, or of a certain place. The important end to be avoided is that the reduced rate does not unfairly affect other interests; that the discrimination is not unjust. Judicious discriminations are naturally controlled by these conditions: They favor those things most which are carried in the largest quantities, and in which there is the greatest possibility of securing an increased traffic. These form the necessities of life consumed by all, and which are used to a relatively large amount by each, as agricultural products, food, fuel and building materials. These have the lowest rates. Things used by all, but in smaller quantities, are next favored as to rates; and those having the highest rates are used by a

smaller class, and to a less extent. This adjustment thus distributes the necessary burden where it is most easily borne. The rule will be recognized by all as right, and discriminations which fairly follow from it are therefore just. In the results of such discriminations the interests of the community and the carriers are the same, the increased business and consequent prosperity of the one being the increased traffic and profits of the other. Yet the basis for a discrimination, however just, if determined by authority of the carrier alone, will be a cause of complaint and discontent to those it does not benefit, and so increase the common misconception that the welfare of the community and the railroad are opposed. But the decision of such a case by the judgment of a commission representing the people, subject still to appeal to the regular courts of justice, would silence the complaint and discontent, would tend to remove the prejudice, and effect greater good than has been, or can ever be accomplished, by continuing the paternal policy attempted in the past.

Similar conclusions have been recently expressed by a distinguished member of the Interstate Commerce Commission. "The concession," he says, "is quite general among shippers, that, with some exceptions, rates as a whole are low enough, and they often express surprise that the service can be rendered at the prices charged. The proper relation of rates is now the vital question, and one important phase of the problem of to-day is how, in the interest both of the carriers and the shippers, to so adjust the rates that neither communities nor certain kinds of traffic will be unduly burdened or unduly favored. The private corporations which operate our railroads do so with a view to resulting net revenue, and are entitled, as a matter of private right, to fair remuneration; but in apportioning charges intended to produce such revenue among the communities they serve and the

“ kinds of traffic they carry, they touch the public interest
 “ with vital effect at every point, and, while keeping within
 “ the rule of just and equal rates to individuals, their prime
 “ duty as public carriers is to apply such rates to localities
 “ and the diversified traffic they carry in relatively just
 “ proportions ” (Hon. W. G. Veazey, address at World’s
 Railway Commerce Congress, Chicago, 1893, p. 29).

By the restriction which, following the rule of common justice, has now been placed on legislative action as to rates, both a moral and a practical gain are assured to all. As the companies will be allowed to keep out of politics, there will be an opportunity for a cleaner class of politicians to make our laws and provide for their administration. The proper powers of the State will be extended in their influence by their restriction to securing equalness and the prevention of injustice. This is the fundamental purpose for which government is formed. The more closely its action is limited to this end, the greater will be the protection to life, the broader the liberties of the people, and the more security will there be given to their property.

History has often proved, and the present instance illustrates the fact, that when governmental action is extended beyond the limits of securing justice, it is most likely to transgress justice. To take from one person or a class for the benefit of another, though done in the form of law, is in principle the same with governments as with persons, and in practice effects the same results. So, with the acts of the State as with the conduct of the individual, that which is just will be found also to be expedient, and produce in the end the greatest good.

GERRIT L. LANSING.

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[California. Committee of 5: 17]

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MEMORIAL

OF THE

People • of • California

AGAINST REFUNDING

PACIFIC RAILROAD DEBT.

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TO THE UNITED STATES SENATE

AND THE HOUSE OF REPRESENTATIVES:

The undersigned, citizens of California, respectfully represent that the people of this State are deeply interested in the settlement of the debts due by the Central and Union Pacific Railroad Companies to the United States, for subsidy bonds issued to them, and they beg to be heard in opposition to any scheme for refunding or extending the time of payment of said debts.

Our opposition to such schemes is not prompted by hostility to the debtors, but by considerations of the highest public importance.

I. It is shown in the Report of the Pacific Railway Commission, that all the visible means and assets of these companies have been wrongfully appropriated to their own use, by the original stockholders and managers, and if any of the proposed legislation passes the companies will have no means, from which to pay the debt, in question except their capacity to earn money by transportation.

The freights they carry eastward consist of the products of our soil seeking a market abroad, in competition with like commodities produced elsewhere; and we have to pay for transporting them to the general markets of the world, where we meet our competitors. Those carried westward are Eastern or European products purchased in the same general markets for consumption here. On these also we have to pay the freight, as an addition to the price of the goods. Hence, excepting the insignificant items of westbound pleasure travel, and local freights from Nevada, Utah and Nebraska, the people of this State will have to pay the entire sum the companies have to earn in order to pay these debts, with their accumulated thirty years past interest, as well as interest for the whole period during which payment may be deferred. That of the Central Pacific Road alone amounts, at maturity, to over seventy-seven million dollars. That of the Union Pacific is about the same amount. To extend these debts for fifty years at two per cent. per annum is to double their amount; and to leave them to be paid out of future transportation is to saddle them, some three hundred million dollars in amount, on us, and our children, for two generations to come. No conquered Roman province was ever so grievously taxed.

II. Any extension of time for the payment of these debts, necessarily involves a condonation of the misappropriation of the funds, provided by the public for the building of the roads, but converted to their own use by those who controlled the companies that did the work.

The "plain, speedy and adequate remedy" for the recovery of the money due the United States, by these companies, that which any business man would adopt in like circumstances, is foreclosure of the mortgages, and if a deficiency arises, an action against the guilty directors as far as they survive, and against their representatives so far as they have left assets, for the restoration of the funds misappropriated by them. Foreclosure is so obviously the first rational step

towards an end of the whole question, that "plain people" are unable to understand why it is not resorted to at once.

The only reason assigned to the contrary is that there is a "first mortgage" on the property which will swallow up all the proceeds of sale; but the priority of this so-called "first mortgage" on the Central Pacific road is challenged, on the strength of facts impossible to deny, and not easy, if possible, within the line of adjudged cases, to answer. The amount is \$27,855,680; too large a sum to be deemed insignificant or to be surrendered without a struggle. The Union Pacific mortgage is perhaps in a similar predicament. Here, therefore is a lien of from twenty-seven to sixty million dollars which every one of the various refunding and extension schemes so far advanced, proposes to abandon gratis, and without even an inquiry as to the rights or equities involved.

The Thurman Act distinctly challenges the priority of these so-called first mortgage bonds in its recital that they are, *if lawfully issued and disposed of*, a prior lien to that of the Government subsidy; but how if they were not lawfully issued or disposed of? Plainly in such case they have no priority. Now on their face they evidently do not conform to the requirements of the Act of 1864, and so, were not lawfully issued; and as to the disposal of them the Report of the Railway Commission shows that they were paid out by the directors of the company to themselves, under the thin disguise of a construction company, of which they owned all the stock, and hence were not lawfully disposed of. Surely this question of law involving nearly 28,000,000 is worth the consideration of a court.

III. These refunding schemes all proceed on the presumption that the Government is without remedy against the guilty parties for these misappropriated millions, although no one of the private suits brought against them on similar grounds has failed to secure a settlement satisfactory to the plaintiffs. "The allegations" says "the report of the commission (p.73) contained in these complaints were such as would compel men of honor, if these allegations were false, to defend themselves at any cost. It appears from the evidence that *all these suits were settled*, and that the stock owned by the plaintiffs was bought at rates varying from \$400 to \$1,000 per share." Why should an effort for redress by the United States be less efficient than one of a private individual? That railroad managers and their partisans should favor an abandonment of these claims is easily understood; that it should be advocated by the surviving partner of the firm that did the wrong and secured the fruits of it, is also natural enough; but that legislators looking only at public interest should even entertain such a proposition before all means of collection have been exhausted, passes comprehension.

IV. These railroad corporations are not in fact so destitute of means to pay as is represented; on the contrary they have valid claims of large amounts against persons possessed of great wealth, sufficient to materially reduce the amount of the debts, and, when added to the sinking fund in the treasury perhaps to extinguish the principal of them. The Central Pacific Company, for example, has a perfectly valid claim against its guilty directors for all the millions misappropriated by them; and even if the estates of the deceased associates prove beyond the reach of the law, Mr. Collis P. Huntington yet remains. He is the surviving partner of the combination that did the wrong, and if not the author of the scheme, was undoubtedly

a guilty participant in the proceedings. He and his millions are directly responsible to the Central Pacific Railroad Company, and to its creditors, claiming in proper proceedings, as such, for all the misappropriated moneys. He is an active promoter of refunding. He annually leaves home to attend the National Capitol preparing, advising and advocating some refunding bill. Why, at his advanced age, and possessed of wealth beyond his power to spend, does he assume this toilsome, wearing, expensive and odious labor, which his confidential letters to his associates published by the Railway Commission show that he hates and detests? Not, be assured, because he feels any interest in seeing the government debt paid, but because he knows that without the condonation involved in refunding he will, in the mere ordinary course of justice, be called on to make restitution! His whole interest in the question is in the condonation that refunding or extension necessarily involves.

V. All of the Southern Pacific Railroad, south of Gilroy and Alcalde, belongs equitably to the Central Pacific Company. It was built distinctly with the credit of that company, diverted by unfaithful directors to the construction of a rival road. This fact is of easy proof; and this asset with the others above named will go far to extinguish the Central Pacific debt. This also is too valuable an asset to be surrendered gratis.

VI. But far more important than all other considerations is the deep shame and dishonor such legislation as proposed will bring on our country and the Congress that enacts it. Consider the simple facts as history will record them.

The United States advanced for the construction of the roads, in principal and interest which it has paid, is paying, and will pay, up to maturity in all \$178,884,249, and donated over twenty-six million acres of land, worth at government price over \$65,073,836, in all \$243,953,595. This advance was made in the midst of civil war and great public peril, when every sentiment of patriotism and honor demanded the strictest fidelity to duty in dealings with the public. Yet nearly half of the vast sum was misappropriated and diverted to their own use by the parties entrusted with the work, and the companies in whose names they acted are left at the end of thirty years stripped of all means to pay, while the individual directors are all millionaires!

To condone such a shocking malversation of public funds, especially after publishing to the world the particulars and proofs of the facts, as Congress has done in the report of its Railway Commission, will be to say to all the world that the American Congress considers these transactions quite up to its standard of morality in dealing with public trusts; that misappropriation of public moneys, if done on a large scale, and by men wealthy from the proceeds of their guilt, is but a minor offense for which a promise to pay half a century hence will buy forgiveness. Nay, that Congress will not even wait to be asked for it, but will be forehanded with the offenders and offer them an unsolicited pardon. What will be the verdict of posterity on the Congress which enacted or the members who voted for such legislation may be easily foretold. What will they think of themselves a few years hence, when the managers, having secured a condonation of their offences, and entrenched their wealth behind a new act of Congress, make default (as most assuredly they will) on their new promises, and abandon the roads to the United States, subject to a mortgage of

undoubted validity of two or three hundred millions, with a floating debt of eight or ten millions more, and reduced to the physical condition described by one of their own distinguished lieutenants as "two streaks of rust and a right-of-way?"

Your petitioners therefore earnestly protest against surrendering the first lien of the Government subsidy bonds, or any Congressional recognition that it has been surrendered; let the courts decide that question; and to present it as well as to collect from the guilty directors of the roads the sums they have wrongfully taken, we pray that the government mortgage be at once foreclosed, as recommended by the United States Railway Commission, and as authorized by the Act of Congress passed March 3d, 1887.

And your petitioners will ever pray, etc.

San Francisco, Cal., January 8th, 1896.

On behalf of the people of California,

CHAS. ASHTON,
JOSEPH BRITTON,
W. M. BUNKER,
J. H. BARRY,
E. S. BARNEY,
J. M. BASSETT,
T. V. CATOR,
N. P. COLE,
DR. FRANK CORNWALL,
W. M. COWARD,
H. Y. COWELL,
H. L. DODGE,
J. T. DOYLE,
HON. J. L. DAVIE,
B. F. DUNHAM,
L. R. ELLERT,
GEO. K. FITCH,
J. RICHARD FREUD,
GEO. T. GADEN,
ADAM GRANT,
H. E. HIGHTON,
N. C. HAWKS,
W. W. THOMPSON,
I. J. TRUMAN,

J. C. JENS,
WM. JOHNS,
J. C. JORDAN,
J. LEGGETT,
OSCAR LEWIS,
STEWART MENZIES,
C. A. MURDOCK,
M. McGLYNN,
P. R. MARTIN,
A. MILLER,
JAS. MADISON,
W. L. MERRY,
G. W. MONTIETH,
MAX. POPPER,
E. A. PHELPS,
TAYLOR ROGERS,
G. M. REYNOLDS,
C. A. SUMNER,
J. E. SCOTT,
C. M. SHORTRIDGE,
F. J. SULLIVAN,
L. STRAUSS,
I. UPHAM,
HON. ADOLPH SUTRO.

The Committee of Fifty, appointed by the monster meeting at Metropolitan Temple, December 7th, 1895.

ADOLPH SUTRO, Mayor of San Francisco,
Chairman.

JOHN M. REYNOLDS,
Secretary.

JOHN T. DOYLE,
JAS. M. BASSETT,

E. W. McKINSTRY,
TAYLOR ROGERS,
Sub-Committee on Memorial.

[California Committee of 1887]

THE PEOPLE OF KENTUCKY DISGRACED.

To the People of the State of Kentucky:

On the 17th day of March, 1884, C. P. Huntington procured your Legislature to grant to Henry D. McHenny, William G. Duncan, Samuel E. Hill, Samuel Cox, Henry McHenny, Jr., and their associates, successors and assigns, a charter incorporating the Southern Pacific Company of Kentucky with a capital stock of one million dollars, to have perpetual succession, with power to purchase, grant, sell, receive in trust or otherwise, all kinds of personal and real property to such amount as the Directors of said company may from time to time determine, * * * and generally to do and execute all acts, matters and things which may be deemed necessary to carry into effect the powers and privileges herein granted, provided, however, that said corporation shall not have power to make joint stock with, lease, own or operate any railroad within the State of Kentucky.

By the second section of said charter the said corporation was, notwithstanding said proviso, given power to construct, establish, acquire, own, equip, lease maintain and operate railroads, telegraph and steamship lines, or any public or private improvements, or any appurtenances thereof in any State or Territory of the United States, or in any foreign country, with other and further powers.

By the third section of said charter the capital stock of said corporation was fixed at \$1,000,000, divided into shares of one hundred dollars each, and declaring

that *'no person shall be in any wise liable as a stockholder of said corporation after said capital stock shall have been paid in cash.'*

By section six of said charter it is provided that 'The capital stock of said corporation may be increased from time to time to such sum as may be determined by the Board of Directors of said corporation, provided such increase or diminution shall be approved by at least two-thirds in interest of the stockholders of said corporation.' And in said section six it was further provided that 'meetings of Directors or stockholders may be held within or without the State.'

Before said 17th day of March, 1884, the said C. P. Huntington, who was the active man in obtaining said charter, which in law is a fraud upon its face, and Leland Stanford, Mark Hopkins and his estate, and Charles Crocker, had been for more than twenty years engaged in constructing, owning and operating railroads in our State of California and in the States of Nevada, Oregon, Texas and Louisiana, and in the Territories of Utah, Arizona and New Mexico.

And the said C. P. Huntington and his above named associates procured said charter from the Legislature of your State for the express purpose of bringing said charter into our State of California and here organizing the company, and compelling all the railroad corporations, which they owned and controlled, in the above named states and territories to lease their railroads to your illegitimate child for 99 years, and thereby to defy, set at naught, evade and trample upon the laws of the State of California and the other States and Territories named.

The said Huntington and his associates did, for the purpose and to the end that they might carry into effect their nefarious schemes, bring said charter to our State, and did set up said corporation to rule over us

and over our laws, which they have now for more than ten years done in such an outrageous manner that we appeal to you, *people of Kentucky*, to put the stamp of your indignation upon it, and crush it out of existence.

And in support of our appeal to you we give you to be informed that no one of your citizens, so far as we know, ever had, or now has, any interest whatever in the Southern Pacific Company.

And we further give you to be informed that Huntington and his associates named above are and always have been and now are the real stockholders, and that they and their agents and servants are now and always have been the directors of said corporation, and that the principal office of said company is here in San Francisco. That they have from time to time increased the capital stock of said corporation until it now amounts to the enormous sum of \$170,000,000, all of which, or nearly all of which, they claim has been subscribed and paid for by themselves. But how? We give you to be further informed that they paid for said stock by transferring stock held and owned by them in railroad corporations owned by them, which railroad stock so transferred to said corporation is not worth the paper it is written upon, for the reason that every one of said railroad corporations has mortgaged its road and other works, and issued bonds secured by said mortgages, to an amount in value at par of the face of said bonds, far exceeding the value of the roads and other property mortgaged, which roads and property, when sold under foreclosure proceedings, will not realize two-thirds of the amount of said bonds. Therefore we tell you that the bantling which your Legislature inadvertently, and without wrong intention, spawned upon us has grown and developed into a great *Octopus*, holding to-day in its eight tentacles five States and Territories, excluding your own State, which gave birth to the monster.

We do hereby respectfully and earnestly appeal to the *people of Kentucky*, to the Legislature of Kentucky and to the Governor of Kentucky, to rid us of this horrible monster which is devouring our substance, and which is debauching our people, and by its devilish instincts and criminal methods is every day more firmly grasping us in its deadly tentacles.

We respectfully appeal to the Legislature of Kentucky to repeal the Charter of the Southern Pacific Company, namely: "An Act to Incorporate the Southern Pacific Company, approved March 17th, 1884," and an act entitled "An Act to amend 'an Act to Incorporate the Southern Pacific Company, approved March 17th, 1884,' approved March 21st, 1888."

We appeal, and we do hereby appeal to the people of the States of Oregon, Nevada, Texas and Louisiana, and of the Territories of Utah, Arizona and new Mexico to join us in laying our common grievance before the people, the Legislature and the Governor of Kentucky, and praying them to repeal the charter of the Southern Pacific Company, and thereby release us from the deadly grasp of the monster octopus.

ADOLPH SUTRO,

President of the Committee of Fifty.



99 out of 100 Against the Funding Bill.

**Resolutions adopted at the State Convention
held in Metropolitan Temple, San
Francisco, Jan, 18th, 1896.**

Whereas, Several bills are now pending in Congress, having for their object the refunding to the United States Government of the debts owed by the Pacific railroads, and

Whereas, The people of California are deeply interested in this question, and are now assembled in State Convention to express their opinion thereon, and desire to respectfully submit the following:

First—That the United States Government, by a large grant of land and bonds, generously aided the construction of the Pacific railways;

Second—That the bonds are now partly due, and the grantees refuse to pay them, and ask the Government to extend for fifty or a hundred years the time of payment at half the ruling rate of interest;

Third—That the assets of said railroads have been fraudulently converted by the original stockholders of the Central Pacific Railroad Company, Huntington, Stanford, Hopkins and Crocker, who and whose estates now declare the roads are bankrupt, while they are each worth many millions of dollars which rightfully belong to the security;

Fourth—That these same parties have by all sorts of illegitimate means kept out competing railroads and thereby managed to extort from the people of this Coast exorbitant rates of freights and fares;

Fifth—That these extortions have impoverished and well-nigh ruined our farmers and brought the country generally into a state of abject dependence;

Sixth—That by such legislation they would also escape personal liability as trustees for the United States, having abstracted the assets constituting a large part of the security, and which are now in their possession, and which had been intrusted to their management; and, therefore, be it

Resolved, That we, the citizens of California, in State Convention assembled, hereby enter our solemn protest against the passage by Congress of any refunding bill whatever, and demand that the law shall be permitted to take its natural course, without interference by the legislative branch of the Government;

Resolved, That the President of the United States be requested to promptly do his executive duty under the Constitution and statutes, and to instruct the Attorney-General to commence foreclosure proceedings without delay, in such form as to enforce the trust and rehabilitate the security itself;

Resolved, That our Senators and Members of Congress be requested to pursue the course indicated in these resolutions as representing the wish and demand of ninety-nine out of every hundred of all the inhabitants of the State of California and of the Pacific Coast;

Resolved, That the Secretary be instructed to forward copies of these resolutions to the President of the United States, his Cabinet, the Judges of the United States Supreme Court, and the members of both houses of Congress, and that a committee of five be appointed by the Chairman of this convention to prepare a memorial to accompany these resolutions, with full power to act.

Foreclosure not a Legislative but a
Judicial Question.

by
Adolph Heinrich Joseph Sautro...

Mr. Sutro's Remarks at the State Convention, held in Metropolitan Temple, San Francisco, Jan. 18, 1896.

GENTLEMEN OF THE CONVENTION :—

“ There is a tide in the affairs of men,
Which, taken at its flood, leads on to fortune,
Omitted all the voyage of their lives
Is bound in shallows and in miseries.”

That tide has come; the tide of popular feeling against the encroachments, the oppressions and the villanies of the powers which rule over us; that Octopus, which, with brazen assurance now stands before Congress, asking that its crimes be condoned and that it be given for all time the property it has converted from the Government.

Let us all work together to beat the Funding bill, and we may escape the shallows and the miseries of half a century to come.

Let one shout go up from all the throats of the people on the Pacific Coast, and grow in volume till it will reverberate from the Pacific to the Atlantic shores—“defeat the Funding bill”—for its passage means the enslavement, the degradation, the downfall of our people, and the triumph of all that is vile in human life and affairs.

The men who now lord it over us have from year to year grown in insolence and arrogance; they have set at defiance our laws; they have bribed judges, packed juries and through a system of bossism corrupted and controlled our elections, and introduced a system of espionage and punishment of opponents which has well nigh made slaves and cowards of our citizens.

Our noble Constitution and laws have been set aside; they have been supplanted by the mandates of the Octopus, which, in secret conclave, sits as judge and jury, and decides who shall be rewarded and who shall be punished.

It holds out both arms—in one hand a sack of money, in the other the assassin's dagger—and cries out to the people: “Take your choice. If you do our bidding we will reward, enrich you and give you office, honor and a foremost place in society; if you oppose us, we will ruin you financially and socially, and we will disgrace you.”

American citizens, descendants of the Revolutionary Fathers, will you take this? Will you permit these low minded villains to take from you your birthright, your citizenship, your flag, your legal rights? Will you become cowards and slaves and do the bidding of these highwaymen?

That you will do if you permit this Funding bill to become a law. For fifty more years you will be deprived of your rights as American citizens; for fifty years you will be ground to the dust; for fifty years the last cent you possess will be squeezed out of you. And during all that time the farmer, the mechanic, the laborer will be permitted to barely exist, whilst your masters take from you the result of your labors and productions.

Bribery and corruption carry the day; honesty and honor are at a discount. We are forced into acts of cowardice and slavery, because individuals are helpless and cannot resist.

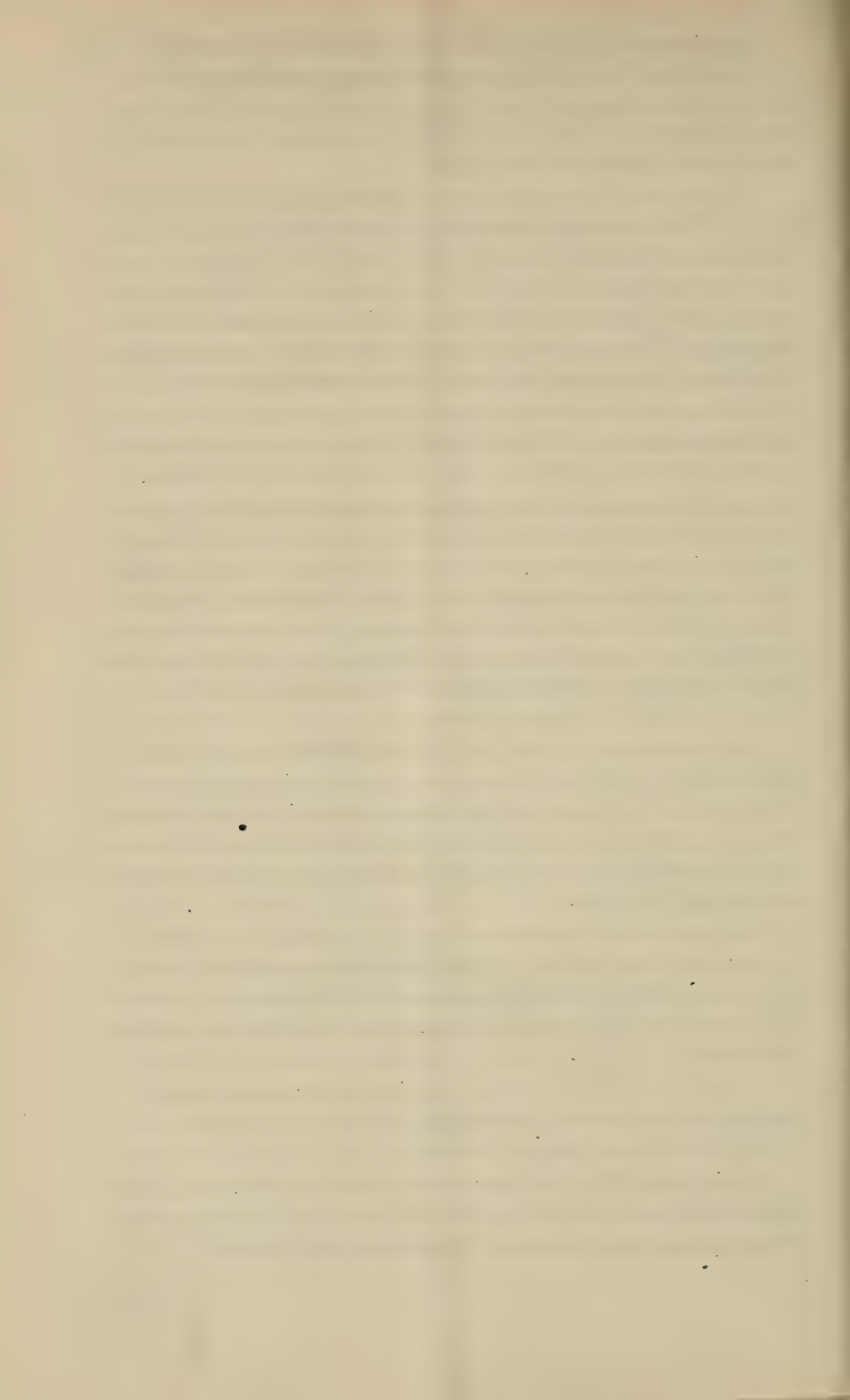
Let us make one united supreme effort and pray Congress to turn a deaf ear to the false pleas of our oppressors, who, through the aid of a venal press, are trying to impress on Congress that but a few agitators are at the back of this movement, while, as a matter of fact, the people, with the exception of a few flunkies, hirelings and dependents of the Octopus, are a unit on this overwhelmingly important question of the defeat of the Funding bill of the Pacific Railroad debts.

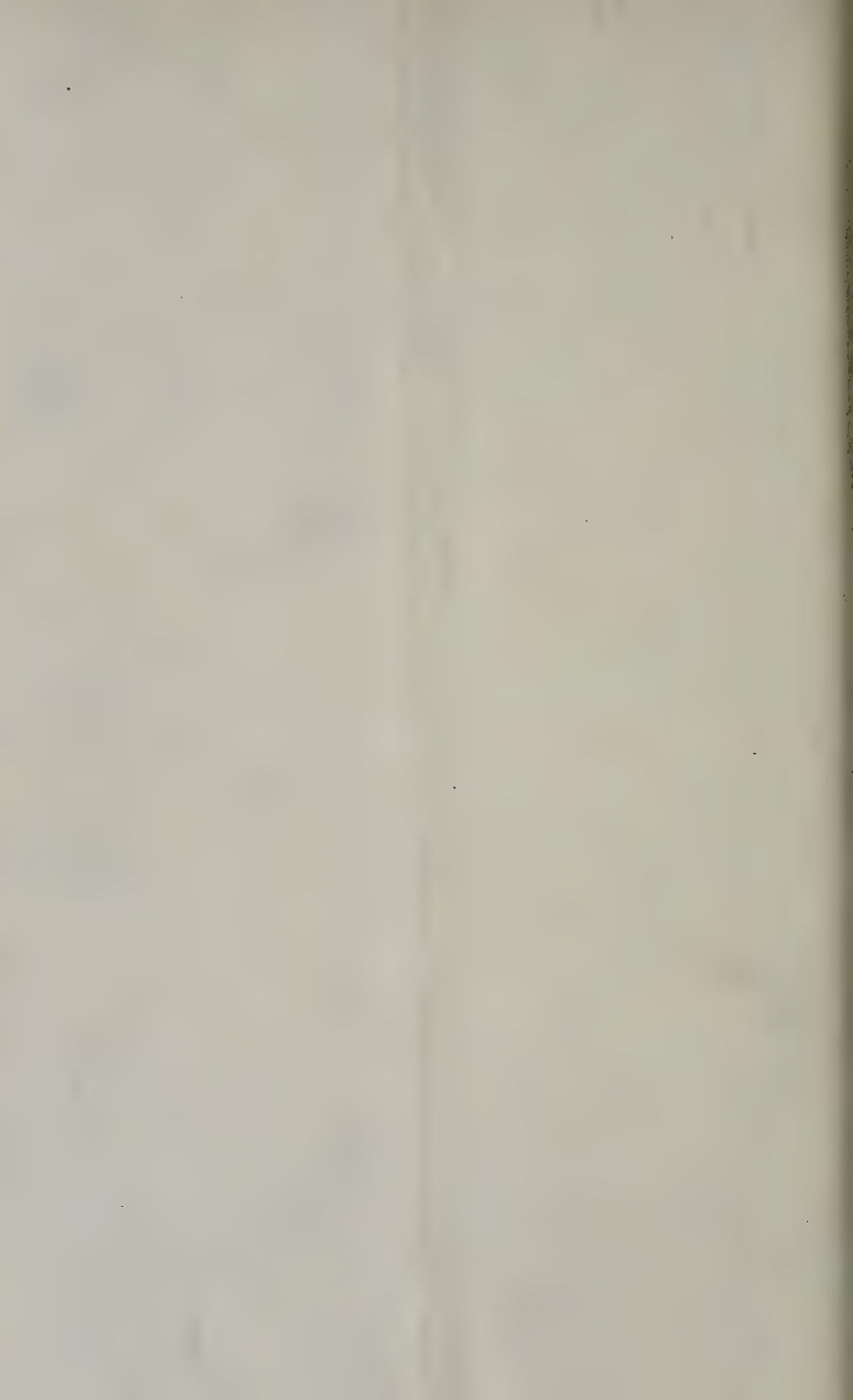
Let resolutions go forth to Congress which cannot be misunderstood; let it be shown that our liberties must not be destroyed by handing us over body and soul to the Octopus for half a century to come—that Congress has no right to fasten on us a monopoly that will exclude all competing railroads from coming to California.

Our government has three branches, the legislative, the executive and the judicial. After legislative action in favor of these railroads, Congress has no right to interfere. It belongs to the executive department to carry into effect the law, and the judiciary to define it.

It is the President's duty to require the Attorney-General to commence foreclosure proceedings, and thereunder let these roads be sold to the highest bidder.

Again I say, this is a momentous time in our affairs, and if the unanimous voice of the people is heard in thunder tones at Washington, right, honor and justice may yet prevail.





California. Committee of fifty

The Central Pacific R. R. Debt.

CALIFORNIA'S REMONSTRANCE
AGAINST REFUNDING IT.

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THE CENTRAL PACIFIC R. R. DEBT.

CALIFORNIA'S REMONSTRANCE AGAINST REFUNDING IT.

To the Senate and House of Representatives
of the United States:

GENTLEMEN:—In again appearing in opposition to the passage by Congress of a measure for refunding or extending time on the debt of the Central Pacific Company, we beg to call to your recollection the many objections expressed in our memorial on behalf of the people of this State presented to the last session of Congress as well as to the following additional facts and considerations, some of which have been developed since that memorial was presented and others have been suggested by the course the discussion of the proposal has taken.

Reversal of Established Congressional Policy as to Pacific Roads.

I. In granting aid to the Texas Pacific road and to the Southern Pacific Railroad it was undoubtedly the intention of Congress to create a southern route across the continent which would constitute a rival to the central route, on that side, as the Northern Pacific road was designed to do on the North. The purpose was to give to the people of the whole country the advantage of competition in overland transportation. Without accurate knowledge of the extent to which extortion in charges was practised on the Central line (since brought to light by the Pacific Railroad Commission), it was common knowledge that the charges were excessively high, and the creation and maintenance of competing roads were recognized as necessary. Therefore to insure their construction and maintenance aid was liberally granted by Congress. Independent of its enormous subvention in bonds, the Central Pacific Company received as a donation of land aggregating, after all deductions, 8,000,000 acres, worth at minimum government price, \$20,000,000, but estimated at more by themselves; their sales down to December 31st, 1882, having produced an average price of \$4.85 per acre. (Vid. Report of December, 1882, pp. 57, 59.) The Southern Pacific land grant in California amounted to 10,445,227 acres, worth at minimum government price \$26,113,175, but of which

their own report of December 31st, 1882, says "a very large portion of them is choice agricultural and timber land and will command a much higher price." In fact the subsequent table in same report shows the average price so far to have been \$4.38 per acre. (An. report December 31st, 1882, pp. 43, 44, 51.) This beneficent and well considered policy of Congress in pursuit of which it has so bountifully endowed these two companies has been deliberately and formally set at naught by the managers, who to prevent the competition designed by Congress, have leased the Central Pacific road for *ninety-nine years*, from April 1st, 1885, to the owners of the whole stock of the Southern Pacific Railroad, and both roads are thus put into common management. The proposed refunding act distinctly confirms this lease, so far as Congress has the power to do so, and threatens penalties against the abused stockholders of the company should they seek to avoid it as a fraud on them! The chief objection to it on our part is its direct hostility to the deliberate and beneficial policy of Congress, which it distinctly reverses in the interest of private parties; a minor one, not however without weight is that it aims to fasten on the stockholders of the company a lease by their trustees in fraud of their rights, which they are now preparing to vindicate, by legal proceedings. This is unjust to them. The method by which the Central Pacific managers retained control of the company after parting with all their interest will be shown further on; what is important here is that the real parties in interest have at last awakened to the wrong done them, and are preparing to claim their rights, and return to the policy of an independent existence and operation designed by Congress; and this is the moment at which it is proposed to enact, as in Section 19 of the pending bill, S. B. No. 2894, 54th Congress, 1st Session, *that if this fraudulent and infamous lease be annulled or cancelled*, even by decree of a Court, that act shall entail the immediate maturity of the whole debt due the United States at the option of the President! The government is thus made to cast the sword and belt of Brennus into the scale wherein the defrauded stockholders are weighing the cost of obtaining justice against their dishonest trustees! Surely Congress will shrink from enacting a law to forbid people who have been defrauded from seeking redress under such a heavy penalty!

False Pretences to Congress—Concealment of Material Facts.

II. The indulgence and extension of time here involved are asked under false pretences the disingenuousness of which should forbid entertaining the proposal. The demand for time to pay is based on the suggestion of poverty on the part of the debtor, whose earning power it is said cannot reach beyond the pittance proposed to be required by the pending bill, but the pretense of poverty is entirely false. The Central Pacific Railroad Company is paying dividends to its shareholders to-day, *with promise to double them as soon as the bill passes*, and it has very large means, money claims, which should be called in and applied to the payment of its debts. Some of these are as follows:

I. Claims against its former directors and managers amounting to many millions, for misappropriation of its funds and property by means of fraudulent contracts and dealings with themselves through the disguise of construction companies; the Contract and Finance Company, the Western Development Company, etc.

II. Claims of great magnitude against the Southern Pacific Railroad Company, its successful rival in business, to be explained below.

III. Claims against its directors for fraudulent mismanagement whereby its revenues have been impaired for their own benefit.

Of these claims in their order. The proof of the dividends paid, afterwards.

1. Claims against its directors for misappropriation of funds, etc. The report of the Pacific Railroad Commission shows that the assets and resources of the Central Pacific Railroad Company were diverted and appropriated to their own private gain and in fraud of the company by the original directors, Huntington, Stanford, Crocker and Hopkins, through the instrumentality of construction companies and gives approximately the amount stolen. These proceedings are now in their outline familiar to all well informed persons, and altogether the frauds practised in the construction of the Pacific railroads are generally regarded as the most disgraceful public scandal in the annals of the country. No public man has ever dared to defend them, though several were shown to have profited by them, and were relegated by public opinion to merited obscurity; they have never received even tacit condonation from Congress, and to pardon them now, by extending the time for payment, as if the liability were an ordinary debt, would be to affirm by act of Congress that in the judgment of that body the acts in question came up to the standard of morals properly applicable to the disbursement of public funds, intrusted, in a moment of great public peril, to the honor of private citizens. Better by far lose the whole amount of the debt than affirm such doctrine. But the debt need not be lost; every dollar of profit gained by these dishonest directors can be yet recovered by the company or by a receiver appointed in a foreclosure representing the interests of creditors and stockholders. The company has never brought such suit because its management has ever been controlled by the perpetrators of the frauds or those deriving from them. Individual stockholders have from time to time sued on behalf of the corporation, but though vigorously defended not one of them has been allowed to proceed to judgment. They have all been compromised for amounts and on terms which implicitly admit guilt. "*The allegations*," say the friendly majority of the Pacific railroad commission in their report (page 75) "*contained in these complaints were such as would compel men of honor, if those allegations were false, to defend themselves at any cost. It appears from the evidence that all these suits were settled, and that the stocks owned by the plaintiffs were bought at rates varying from \$400.00 a share to \$1,000.00 a share.*" None of these settlements however condone the wrongs done the company, and no statute of limitation has barred its right. That right is an asset of great value, for the responsibility of Mr. Huntington, individually, and of the Crocker estate, are undoubted. The latter has been fortunately kept undivided by transfer to a corporation composed of the heirs, and is distinctly recognisable in present hands.

II. and III. Claims against the Southern Pacific Railroad Company, and Claims against its own directors for fraudulent mismanagement of its business. These for brevity will be treated together, but to do so requires some preliminary explanations.

The California Railroad Combine—How Composed—Its Continuity—The Southern Pacific Company.

It must then be premised that the management of the Central Pacific road has been substantially unchanged from its organization to the present day. When the *personnel* has varied the transfer has been from brother to brother, from father to son, from uncle to nephew, or from deceased to surviving partners. There has been an absolute continuity of design, system, policy, methods and practices from the beginning so that we may speak of the management at all times as continuous. The form of the combine remained unchanged down to 1884, when it took a corporate shape, as to the "Southern Pacific Company."

The original Central Pacific combination consisted of Collis P. Huntington, Leland Stanford, Mark Hopkins, Charles Crocker and E. B. Crocker. They undertook the building and financing of the Central Pacific road and shared the profits equally. Whether they were technically partners is disputed and not here material. The last named associate died first, and as was natural the survivors bought up his interest. Mark Hopkins died next, intestate and childless; his widow retained his interest and took his place. The others were now growing old and to husband their energies the survivors sought a younger associate to share their labors. They sold an interest of one-fifth to David D. Colton and took him in. By this time they had branched out into extensions of the Central Pacific road, northward up the Sacramento Valley, and southward through that of the San Joaquin, and building the Southern Pacific road. Colton was very active in the management. He died however, quite suddenly from an accident, and as he had not been long enough in the concern to become an essential part of it; and left no representative who could contribute the services that he had rendered, it became necessary to buy his interest. This was done, quite promptly, but in a manner and under circumstances, that led to a subsequent action by Mrs. Colton to set aside the sale, and have an account taken of the affairs of the concern. In the course of this trial, which was contested with great obstinacy, was brought to light the correspondence between Huntington and his associates which has since become so famous (or infamous). It forms a part of the transcript on appeal.

The Colton incident drew the attention of the surviving parties to the danger that menaced them, as their numbers continued to grow less. If each successive death were to involve a purchase of the deceased's interest by the survivors, what would be the lot of the longest liver? Mr. Huntington is credited with the invention of the idea of obtaining a charter of incorporation for themselves; surrendering to such corporation the shares of stock held by the individuals in the various railroad companies they had formed, and taking, in exchange for it, stock in the new company. This plan was adopted, and a legislative charter was obtained from the State of Kentucky for the Southern Pacific Company. The original proposal was to have the stock of the new company held equally by the four remaining associates, viz: one-quarter each by Stanford, Crocker, Huntington and Mrs. Hopkins; but at the last moment Mr. Huntington recurred to the annoyance they had previously experienced from their inability to deny that the Southern Pacific and Central Pacific Companies were in fact composed of the same individuals (referred to in his letters to Colton), and suggested taking in an additional associate, and selling him a

small interest. This was acceded to and a fifth shareholder taken in; but he presently tired of his purchase and sold his shares to Huntington, or fell under his control, and thus it came about that Mr. Huntington united with *any one* of the other parties controls the action of the Southern Pacific Company. Mrs. Hopkins having remarried in her old age, on her death left a will in favor of her youthful husband, a Mr. Searles. This gentleman, having other tastes, has not taken personal part in the railroad management, and thus Mr. Huntington, by his acquiescent coöperation, has come to wield the whole power of the Southern Pacific Company, and his single will reverses the deliberate policy of Congress in pursuance of which it has granted away over a hundred million acres of the public domain, 10,445,227 thereof to the Southern Pacific Railroad Company of which he then was and practically still remains the controlling owner. Being a Kentucky corporation, the Southern Pacific Company organization is not governed by the laws of this State wherein its business lies, and the proportional representation of stockholders in the direction allowed by California law has no place. The other parties in interest are therefore indebted to the consideration of Mr. Huntington for their positions in the board, and must dance to such music as he sees fit to play. He is the president of the company, and is no "*King Log!*" He controls everything, and is to all intents and purposes the company.

What Property The Southern Pacific Company Owns.

It never had any cash capital. The stocks held by the organizers were transferred to it, at some agreed prices, bearing no relation to their actual value and its stock issued in payment therefor. Thus it owns the stocks of all the other railroad and transportation companies which its managers have from time to time built or purchased, except the Central Pacific, and nothing more. A few shares of each are placed in the names of dummies in their employ, or under their control, to qualify them as directors of the various companies, and thus the doings of these corporations are dictated and controlled by the single will which controls the Southern Pacific Company. As every road whereof it owns the stock is mortgaged for far beyond its value or cost, the value of the stocks which constitute its whole capital is obviously but nominal. Whenever additional property is acquired, it is at once duly mortgaged for all it will possibly bear, and subject to such mortgage transferred to or held by the Southern Pacific Company.

The Southern Pacific Company chooses the directors and controls the management of all these roads of which it is the *lessee*, besides owning the stock. It finances them all, gets all their cash into a common purse, manages their sinking funds, lending the money of one to the other, and that of the other to a third, and so round the circle till it comes back to where it started, and the whole thing becomes a mere matter of book-keeping, needing no unnecessary and inconvenient payments of cash. The lease of the various roads other than the Central Pacific is styled the "*Omnibus Lease.*" It has been lauded as a method of insuring unity and economy of management, etc. The principal feature however, which a studious reader will be apt to recognize in it, is a clause, which reversing the old rule or reserving a rent to be paid by the lessee to the lessor, provides that *the lessees shall have ten per cent. of the proceeds of the business for managing and taking care of the property of the company whereof they own the whole stock!* While the lessees continue to own all the stock, this may be harmless;

but whenever they shall put any of those stocks on the market and succeed in making sales of them, the purchasers may be expected to discover its radical dishonesty when they find a portion of the stockholders in their capacity of lessees, absorbing ten per cent of the proceeds of the business before leaving a cent for them.

Members of Congress should also be informed that the Pacific Improvement Company (commonly written P. I. Co.) is another of the Protean corporate forms under which these railroad managers mask their operations, just as the Western Development Company was before it, and the Contract and Finance Company before it in turn; continually changing in name, ever the same in fact.

Returning from this necessary introduction of the characters we come to the gigantic fraud on the Central Pacific Company, perpetrated by its managers in 1880. It consisted essentially in *using the credit and means of that company to build, for their own benefit, the Southern Pacific road as a rival line*, designed and calculated to destroy the value of the Central! The process of this was as follows:

The Situation in 1870. Commencement of the S. P. Road.

What is now called the Southern Pacific Railroad began with the construction of a road from San Francisco, 80 miles south to Gilroy. It was completed in 1869. Mr. Huntington intimates—in fact asserts—that it was done by his Southern Pacific Railroad Company; but this is one of those curious lapses of memory, to which some persons are subject, by which they not only forget what occurred, but remember exactly what did not! The fact is neither he nor any company he was connected with built a single mile of it. It was built by Peter Donahue, Henry M. Newhall and Charles B. Polhemus, (the last named is still living) under the corporate name of the San Francisco and San Jose Railroad Company, and that of the Santa Clara and Pajaro Valley Railroad Company; to build and equip it cost about \$1,300,000 and it was in use as a local road. In 1865 a company was organized in San Francisco, by eight or ten gentlemen,—William T. Coleman, Timothy Guy Phelps, Charles N. Fox and others, under the name of "The Southern Pacific Railroad Company," but it had no actual capital, and built no road; was in fact a mere paper organization. There was another company organized in 1870 called the California Southern Railroad Company, which was in similar plight. By this time some progress had been made in selling the shares of the Central Pacific Company, though Mr. Huntington and his associates continued to retain its management. They decided on building another road which by its more advantageous location, more favorable grades, and preferable approach to the city of San Francisco direct, would be able to successfully rival it in business. With this view they purchased from Messrs. Newhall, Donahue and Polhemus, the stock of the two roads first above mentioned (from San Francisco to Gilroy) and from the organizers of the second two companies named, their good will and corporate names, and in October 1870, consolidated the four companies into one under the name of the "*Southern Pacific Railroad Company.*" The route designated was from San Francisco southwards through the Santa Clara and Salinas Valleys, across the coast range of mountains into the San Joaquin, and up that valley, and over the Tehachapi Pass to the Colorado River. Its nominal capital was \$30,000,000. Its actual capital the road from San Francisco to Gilroy, and its equipment, nothing more, and that mortgaged for \$968,000.

Meantime the Central Pacific Company had constructed a branch of its road extending southwards from Stockton up the San Joaquin Valley, some 150 miles, to a place called Goshen, a mere hamlet—but the point at which the projected Southern Pacific road would intersect the Central. During the winter months succeeding the purchases above mentioned, the parties succeeded in procuring the insertion in the Act of Congress of March, 1871, of a land grant in favor of the Southern Pacific Railroad Company, and soon thereafter began to build from Goshen onwards towards the Colorado river and the State line.

There was no *bona fide* subscription to the stock of the Southern Pacific Railroad Company, nor any contribution of cash capital. The whole business was managed through the instrumentality of a construction company composed of the managers of the road itself, who were also the trustees and managers of the Central Pacific. This construction company contracted with the Southern Pacific Railroad Company to build and equip its road for all the stock of the company and all its bonds. The original intention was to issue \$40,000 of stock and an equal amount of bonds for every mile of road built, but this excessive capitalization seems to have been afterwards reconsidered and made somewhat less.

They began building the S. P. road from Goshen, above named, southwards, in 1872, and in that year constructed, say, 21 miles. In 1873 they built about 20 more, and in 1874 some 34 additional, making 75 in all in that valley; during the same period they added some 81 miles to the length of the road from San Francisco to Gilroy. This was the situation at the commencement of 1875.

The Fraud.

In July, 1875, the Southern Pacific Railroad Company executed a mortgage for \$46,000,000 to trustees, dated April 1st of that year, covering the whole of their road existing and contemplated (being, as described, 1150 miles in length, or at the rate of \$40,000 per mile of road); a large amount of these bonds was issued to the construction company, and the problem before Mr. Huntington and his associates was to sell these bonds, and, until sales could be effected, to give them an apparent or prospective value, which might meantime render them available as collateral security.

People investing in railroad bonds naturally look at the earnings of the road, as a guide to estimate values; and as the San Joaquin Valley south of Goshen was then quite unsettled, and could furnish neither freight nor passengers to the new road, they determined to make a show of business over it by using the credit of the Central Pacific Company. For this purpose they made a lease dated September 1st, 1876, to the latter company of the branch of the Southern Pacific railroad extending from Goshen southward to the Colorado River, *constructed and to be constructed*, for six thousand dollars per annum, for every mile thereof built and ready for operation. The rent would thus increase by six thousand per annum with every additional mile of road built. *From this rent, however, the lessees were permitted to deduct \$3,000 per mile per annum for operating expenses.* And, probably to divert the attention of the Central Pacific stockholders from the importance as well as the dishonesty of this lease, it was made terminable by a notice of sixty days, as if it were a mere temporary arrangement. The very circuitous mode here resorted to of reaching a rent of \$3,000 per mile per annum naturally suggests a sinister design,

and there was one quite in harmony with the whole knavish proceeding of which it formed a part. The object was to enable the Southern Pacific railroad to appear in the financial publications of the day as earning from this branch of its road, while yet unfinished and without a terminus at either end, \$6,000 per mile per annum, and being operated at fifty per cent. of its gross earnings! Obviously, a road through a new country which, while yet in an unfinished condition—running, in fact, from no place to no place,—could make such a showing as that, had before it the brightest of prospects. The terms of this fraudulent lease, therefore, were arranged for the purpose of deceiving the public, by holding out false and delusive prospects of the earning capacity of the road, and thus rendering the disposal of the bonds more easy. The making of this lease and the particular form of reservation of rent in it were both parts of a dishonest contrivance to bolster up the credit of the Southern Pacific Railroad Company, at the expense of the Central, and to enable Messrs. Huntington and associates, while acting as directors and trustees of the latter company, to hypothecate and afterwards sell the bonds of the former. It need scarcely be said that this constituted a gross fraud on the Central Pacific Company and its stockholders, and that under our law, as under that of all civilized countries, the last-named company is entitled to recover from its dishonest trustees all gains and profits of every kind derived from it, and this without any participation in or allowance for their labor or risk in the venture.

The disgraceful history of this issue of bonds of the Southern Pacific R. R. Co. is not yet all told, nor the published evidence of the fraudulent design exhausted. They were inscribed on the stock list and offered on the New York exchange; bids, offers, washed sales and all means (even down to a fictitious sale of a lot of them under an execution) were resorted to to give them currency, but without success; the gudgeons of Wall Street refused to bite; and down to March, 1880, the bonds remained in the hands of the construction company, unsold and practically unsaleable.

About the period last mentioned, Messrs. Speyer & Co., a firm of bankers in New York, pointed out the weak spot in Mr. Huntington's case to him; *it consisted in the right to terminate the lease by sixty days' notice*, and they offered if that defect were remedied to their satisfaction to take up the loan and float the first ten million of the bonds at a price agreed on. They agreed to take two millions of them at ninety, and got an option of eight more. As if to emphasize the fraud on the Central Pacific Company, and illustrate it, if possible, more clearly, the bankers insisted on, and Messrs. Huntington & Co. consented to a modification of the lease to the Central Pacific Company, *whereby it was made to continue in force absolutely for five years, and thereafter, until the Southern Pacific should have extended its road so far as to connect directly by rail with the railroad system of the Atlantic side, not exceeding ten years in all*. This modification of the lease was made and executed early in 1880, and the preliminaries having all been arranged, and the comedy fully rehearsed, there appeared on the morning of March 9, 1880, and the three following days, in the "New York Tribune," an advertisement, announcing that subscriptions would be opened on the 11th of that month, and closed on the 12th, in *New York, Boston, Frankfort-on-Main, London, Amsterdam, and Berlin*, for ten million dollars of six per cent. first mortgage bonds of the Southern Pacific Railroad Company (describing them), offers to be

made to certain banking houses of those cities respectively. This advertisement was conspicuously displayed, and among the inducements offered were that the bonds "were secured by a first mortgage on the railroad and telegraph line, rolling stock, fixtures, land and franchises of the Southern Pacific Railroad of California." That the total length of the projected road was 1,150 miles (specifying how made up), "of which 712 miles were completed and in operation," divided into the Northern and Southern divisions, the former extending from San Francisco to Soledad, and from Carnardero to Tres Pinos, in all 161 miles, and the latter from Huron to Yuma (with a branch of the road from Los Angeles to Wilmington), in all 551 miles, and intersected at Goshen by the San Joaquin branch of the Central Pacific road. That the net earnings of the southern division (through rental to C. P. R. R. Co.),

were in 1878.....\$1,656,360 00

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that the San Joaquin Valley Branch of the Central Pacific Railroad furnished the Southern Division with an outlet both to San Francisco and eastward over the main line of the Central Pacific Railroad, and that "in view of common interests the Central Pacific Railroad Company had taken a lease of the Southern Division of the "Southern Pacific Railroad of California, for a period of not less "than five years, from January, 1880, and by the terms of the lease if "a railroad is not completed in five years from that date, so that "there is a connection of the Southern Pacific Railroad of California "with the eastern system of railroads on what is known as the 32nd "parallel line, the lease shall be extended until such connection is "made; provided such extension does not exceed five years longer, or "ten years in all from January, 1880. That by the terms of the lease "the net rental agreed to be paid during the continuance of this lease "and any extension thereof shall be \$250.00 per month, or \$3,000.00 "per year per mile (being at present on about 551 miles, equals about "\$1,650,000.00 annual rental), 'and if for any cause, it' shall be reduced by mutual consent of the parties, that the annual amount of "such rental reduced shall at least be sufficient to pay all the interest "that has been or may be agreed to be paid in any one year on 'any "bonds of the Southern Pacific Railroad Company of California, "outstanding during the continuance of this lease."

The modifications in the terms of the lease indicated in this advertisement seem to have been all that was required by the bankers, and promptly after the time for closing the bids, without waiting to hear from London, Frankfort-on-Main, Amsterdam or Berlin, it was announced that the whole block of bonds had been taken by Messrs. Speyer & Co., and thereafter they were gradually peddled out on the New York market and ultimately found buyers. The sales of these bonds thus introduced in the stock exchange by the credit of the Central Pacific Company aggregated over \$32,000,000 and at an (estimated) average price of about 95 per cent. The sales from the land grant obtained by the building of the road have amounted to over ten million dollars, and much remains unsold. All these large sums should be accounted for to the Central Pacific Company as the fruits of the fraud. Thus the dishonest directors of the Central Pacific road procured the means for constructing the Southern Pacific, which by its shorter mileage between the oceans, its easier grades, and the preference given it

in the routing of freight, has been almost the ruin of the Central Pacific. To ensure the disastrous result however, the managers determined to cut off its local freights also, and to this end constructed (in the names of companies ultimately consolidated with the Southern Pacific) a substantially parallel road through the San Joaquin Valley on each side of the Central, ready to intercept every pound of freight approaching it on either side!

Other Frauds in Central Pacific Management.

1. We have already mentioned the ninety-nine year lease of the Central Pacific road to the Southern Pacific Company (of Kentucky). Considering the relative positions of the several parties, the ownership by the lessees of the whole stock of the rival road and that of the Southern Pacific Company's stock by those managing the Central Pacific direction, it cannot be doubted that this lease would be pronounced by any court of equity a gross fraud on the Central Pacific Company. Its ruinous character is obvious.

We will not dwell on the diversion of traffic from the Central to the Southern route, though the loss of revenue by the former from that cause must have been enormous. Owning all the stock of the one road and having no interest in the other, while they managed both, it was perhaps but natural for such parties to favor their own road at the expense of the other. The power to do so was obviously a principal motive for the ninety-nine year lease, the terms of which, it may be remarked, left them at liberty to change the rent from time to time practically at discretion. To assert that they exercised with impartiality great powers so dishonestly obtained would be to invite derision, not belief. The Kentucky corporation as lessee of both roads did the carrying, issued the bills of lading, etc., so that unless the shipper took special pains (for which there was rarely a motive) to expressly direct his freight sent over the Central route, it was at the discretion of the carriers, and naturally went by the Southern. The arrangement of time schedules, greater promptness in delivering freight, adjusting reclamations, and like considerations, helped to determine the choice of shippers in the same direction. The revenues of the Central Pacific road rapidly fell off, and its dividends went down to three and two per cent., and finally to zero.

2. For many years after the completion of the Central Pacific road, its managers were the largest borrowers of money in the San Francisco market, and large borrowers wherever they could obtain it. Any person having a sum of any magnitude to loan could have from them the note or the endorsement of the Central Pacific Railroad Company. *None of this money was for the use of the Central Pacific Company, but for that of the managers;* yet the credit of the Central Pacific Company was strained to the utmost to procure it. An ordinary broker's commission on these loans of credit would amount to a large fortune.

It would be difficult to put a limit to the recovery which the Central Pacific Company is entitled to from its dishonest managers and its rivals for these frauds, which are probably but specimens, of which there are plenty more to be brought to light by a proper investigation. This seems to be the most appropriate place to account the latest chapter of Central Pacific history, which has indeed something of the grotesque about it.

IV. The appeal to Congress to refund the debt at a low interest is made on the suggestion of inability to pay. Hon. Grove L. Johnson,

of the House of Representatives, published, during the recess of Congress, a long letter defending the pending measure, substantially on that ground. He thought that at any higher rate of interest than two per cent. the company could not pay the debt without rates of freight that would be ruinous to California shippers. He could not have been aware when he did this—in fact few would listen with patience to such an argument, if they were aware,—that *at the very time Mr. Huntington is posing the company before Congress in forma pauperis, he has been paying the stockholders dividends on their shares and is under promise to double the same as soon as the refunding bill has been passed.* The payment of this dividend has not had any publicity, has in fact been practically a secret, but it is the fact, and the history and proof of it are about as follows:

The Secret Dividends of 1895, 1896, and How Brought About.

It is known that the great bulk of the Central Pacific stock is held in England. It was sold to English purchasers between 1875 and 1890 by the device of paying large dividends on it while at the same time the sellers were building the Southern Pacific road to take away its business as above related. The Englishmen were deterred from transferring their shares to their own names by the artful suggestion of individual liability for corporate debts, and more especially for the Government subsidy bonds under California law. Their holdings were therefore represented by certificates in the names of former holders, endorsed in blank. To facilitate concealment of ownership a form of certificates was invented, with dividend coupons attached; so that the holder need not a receipt for his dividends or even present himself to get them. No one could know his identity except the banker with whom he deposited his coupons. These former holders were employees of the company to whom the managers had transferred their shares in lots of ten, twenty, thirty, fifty, one hundred, two hundred, three hundred, and five hundred shares, which, being endorsed, passed from hand to hand by delivery only. *Proxies for voting were taken in all cases from these employee-shareholders, which as the stock remained on the companies' books in their names have enabled the sellers ever since to elect the directors and control the management of the company.* Dividends paid under a former arrangement ceased some two years since, and after a period of waiting, the Englishmen became dissatisfied with the management, and after meetings and consultations despatched to this country Sir Rivers Wilson, to investigate, threaten, and get what he could for them from the directors of the company. Sir Rivers came to California, interviewed the officers of the company, made his examinations, etc., and was reported in the papers after his return to the East as having arrived at a compromise with Mr. Huntington, the President of the Southern Pacific Company. After this settlement he was reported in the press as proceeding to Washington and there contributing his effort in favor of the refunding bill of last session. On his return to England, the results of his mission was communicated to his constituents, with the recommendation that they transfer their shares to their own names, and take the control of their own property. The substance of his negotiation soon became known on the London stock exchange, where the shares were dealt in, and the London "Economist," a financial journal of high standing, noticed the matter as one of public interest, in its issue of March 23rd, 1895, in the following terms:

From the "Economist" (London), March 23d, 1895, page 385.

THE POSITION OF THE CENTRAL PACIFIC.—Some slight compensation it appears Mr. C. P. Huntington is willing to make to the Central Pacific shareholders, since he has stated through Sir Rivers Wilson that he will undertake to pay one per cent. per annum in the shape of dividends until 'satisfactory legislation has been obtained for the adjustment of the company's debt to the government,' after which rather vague date, two per cent. per annum is to be paid for the period of two years, during which the shareholders will have time to review their position, and to consider the advisability of endeavoring to effect an arrangement or a more permanent and more profitable character. Sir Rivers Wilson takes the same view of the position of the company as that of the *Economist*, and indeed that of most of those who have considered the facts. The Central Pacific is at present in the grasp of the Southern Pacific, which is virtually Mr. Huntington in what may be termed a corporate form; it would have remained a profitable undertaking if the present lessees had not worked its ruin. In the future probably it can be best worked in connection with the Southern Pacific, provided equitable terms can be arranged; and finally as there is nothing really to fear in the theoretical liability on the shares, holders should at once without delay, register, so as to make their voting power efficient. If that be done, and if terms can be made with the government, English investors may ultimately suffer less loss than once appeared probable. They will however, have to be very careful in approaching Congress. They must remember that they have no claim to anything save that which is given by the strict letter of the law. If they have been swindled by the 'bosses' in control of the Company, which is often alleged, not only have many others suffered in the same way, but few have been guilty of so much contributory negligence. It has also to be remembered that if the shareholders have not fared well, the United States government made a bad bargain over the subsidy which it granted to the Central and Union Pacific Companies. And, of course, it is scarcely necessary to assert that the fact of the credit of the United States having so greatly improved is no reason whatever why one of its debtors whose credit has not improved, to put it mildly, should get free from the obligation. As a matter of fact, the American government, does not, we think, want to foreclose, for simply as a question of expediency, that would be unadvisable, and therefore if the Company sues, as it is bound to do *in forma pauperis*, Congress will probably come to some fair arrangement despite the apparently hostile position which it has recently assumed."

Four weeks after the publication of this article, Mr. Huntington replied to it under his own signature, as follows:

Mr. Huntington's Reply.

From the "Economist" of April 20th, 1895, page 519.

"MR. HUNTINGTON AND THE CENTRAL PACIFIC RAILROAD.—To the Editor of the *Economist*; Sir:—Some one has sent me a clipping from your issue of March 23d. The *Economist* has been sent to me occasionally for years, and I have heretofore considered it one of the best financial papers published in England. That being so I do not think its editor would knowingly do any individual or corporation wrong.

" I was the principal factor in building the Central Pacific road; that is I organized the company, and sold all the securities, I believe I intended to deal fairly with all people having dealings with the company, and I believe I have done so.

" The Government, as you know, granted aid to two other lines—the Northern Pacific and Atlantic and Pacific (Atchison Topeka and Santa Fe)—which not only divided the tonnage, but cut down the rates; and later other roads were built, so that there are now substantially, seven roads crossing the continent, when one double track railroad could do all the business that is being done, and much more, without any particular inconvenience.

" If any body has any charge to make of any particular thing that I have done that was unfair, I would like to have him tell me what it is. No one up to this time has told me, or intimated that there was any particular charge, but in a general way, some of the California newspapers and some of the discharged *employees* have been wildly throwing words into the air to the effect that something had been done somewhere or at some time, but they do not state where or how.

" The Central Pacific should have cost twice as much to build as any other road did, as the physical obstructions to overcome were much greater, and all the cost of construction, for grading, timber work, such as the bridges, ties, etc.—in fact, everything that was furnished in the building of the road, excepting rails, fastenings and rolling stock, was paid for in gold in the sixties, when gold was at a high premium. The coal we had to use as fuel, cost us for many years an average of over eight dollars a ton, which is immensely more than it cost the other aided roads, and still the Northern Pacific is in the hands of a receiver, I believe for the second time, the Atchison Topeka and Santa Fe (Atlantic and Pacific), is in the hands of receivers for the second time, and the Texas Pacific, I think, has been in the hands of the receiver three times; whilst the Central and Southern, I believe have paid all their debts, and I have no doubt will be able to do so in the future, with the exception of the debt owing to the Government, upon which it is hoped Congress will grant an extension at a low rate of interest, such as the companies can meet and still pay something to the shareholders.

" I am very truly yours,

" C. P. HUNTINGTON.

" NEW YORK, April 3rd, 1895."

Mr. Huntington, it will be seen, does not deny the correctness of the Economist's statement of the agreement, but pleads in confession and avoidance, that he was the chief factor in building the road and sold all its securities, and that he has not put it in the hands of a receiver, he adds that he has not been informed of any specific charges of misconduct against himself. This defense, so far as it goes, is partly true. Mr. Huntington has not put the road into the hands of a receiver, probably because he preferred to receive himself. But he does, by his eloquent silence, distinctly confess that to pacify the English stockholders, represented by Sir Rivers Wilson, he agreed with that gentleman that they should be paid in the shape of dividends on their stock one per cent. per annum until satisfactory legislation has been obtained for the adjustment of the company's debt to the government, "after which two per cent. per annum should be paid

for two years more," to permit the shareholders to review their position and consider the advisability of endeavoring to effect an arrangement of a more permanent and profitable character. These statements can leave no doubt of the agreement with Sir Rivers Wilson, but they are at the moment of writing confirmed, if confirmation were needed, by an interview with Col. C. F. Crocker, Vice-President of the Southern Pacific Company, published in the San Francisco "Chronicle" of December 2nd, 1896, wherein he says: "The Central Pacific is not on velvet, but it is not in the depths of despair into which the Northern Pacific has fallen, *and the stockholders have been receiving a small dividend every year.*" The payment of this secret dividend is then established.

Amount of this Largess—By Whom Paid, and Why—Falsifying Annual Reports to Conceal It.

To pay a dividend of one per cent. on the stock of the Central Pacific Company requires \$672,000 dollars, an amount too large to be overlooked by a slip in book-keeping, or to be easily concealed under some general head. And the question whence comes the money wherewith they are paid is not without importance; for these great railroad companies, whether we regard them as quasi-public corporations, or as organized solely for private gain, are certainly exercising great public franchises and trusts which affect large numbers of people. They publish annual reports of their dealings and business, on the truth of which millions of dollars are invested, frequently the funds of unprotected and helpless people, and even legislation is predicated. The publication of falsehood or the suppression of truth in such reports is, therefore, an offence against public morals of the gravest sort, which not even the most devoted partisan would venture to defend, or propose to condone. We have searched the annual reports of the Southern Pacific Company and of the Central, both those made under oath and laid before the State Railroad Commissioners, and those printed by themselves for public information, without being able to find one word on these dividends or any allusion to them; the inference seems inevitable of an intent to conceal them from Congress and the public. Surely the Congress of the United States will exact from applicants for its bounty, at least the homage of respect for truth, in the representations on which it is called on to act! The payment or amount of these dividends is not of so much importance as the duplicity and falsehood of the managers which it reveals. And the question comes right home to Mr. Huntington, personally, for the bargain was made with, and the promises made by him, and the reports from which it is suppressed bear his signature, and are distributed by himself and with his sanction. Failing to disclose the truth in a matter so material, their statements and those of their authors must be justly discredited in everything.

Denied authoritative information as to the motives for, or the source of this extraordinary dividend, which was paid to the stockholders without being earned by the company, declared by the board of directors or shown on the books of account, we are driven to conjecture; and the suggestion arises that they may be paid by one or more of the guilty directors or other persons interested in placating the dissatisfied stockholders and passing the refunding bill. This conjecture is not without probability, and if accepted, public opinion will not be apt to hesitate long as to the name of the distributor of such lavish

largess or in conjecturing its motive. A settlement made with the United States, embodied in an Act of Congress, which at the same time condones so many and such monstrous frauds, ensures his Southern Pacific road for eighty-eight years to come against the competition of the Central Pacific road, and gives to his dishonest ninety-nine years lease the sanction of the law of the land, may well be worth double or treble the sum required to pay these dividends—say \$4,032,000.

Another probable conjecture is that the arrangement is designed to permit the English stockholders to sell out their holdings and shift the loss on other victims, which perhaps two years' time with dividends meantime at two per cent. per annum, may enable them to do. Such a course may seem to them preferable to litigation with an adversary whom they have been led to believe the only man capable of handling the U. S. Congress, and who, if this measure passes, will readily be credited with like power to "handle" the President, and thus capable of calling down on them the thunders of Olympian Jove in the shape of an executive option to call in the debt the instant if they dare to attack the lease which has been their ruin.

In any case for Congress, in face of the revelations here made, to pass a refunding act based as all such propositions are, on the supposed inability of the company to pay its debt—without a previous clear explanation and understanding of this transaction, whether it represents dividends or hush-money, would be to put itself in the position of appearing as either the dupe of designing men or their instrument in deceiving others. Neither position very desirable, or consistent with its own honor and dignity.

Other Assets of the Central Pacific Company.

There are other assets of the Central Pacific Company which, though not of such magnitude as those mentioned, should not be lost sight of. Among these there is a mortgage made April, 1889, for \$16,000,000 under which the latest report shows \$12,283,000 bonds issued. This mortgage covers a variety of scattered properties, the most important being the land in Mission Bay, San Francisco (30 acres), granted by the Legislature in 1868, for terminal purposes, and since enlarged by the closing of streets to nearly fifty. The variety of properties included in the mortgage suggests the intent to cover everything the company had left not specifically and safely covered before. These bonds have never made their appearance on the stock-exchange nor been dealt in by the public. The fact that an action was commenced by the Attorney General to vacate the patent for the Mission Bay lands, soon after its issue, which has been pending ever since, would be quite sufficient to prevent their sale to real investors, and hence it is perfectly safe to assume that these \$12,283,000 bonds are in the hands of the old directors, under the name of some one of their numerous companies. There is no probability that they could pass an investigation as to their origin or consideration (issued in all probability to themselves under the name of a construction company, in their usual way), and investigation should be made, that the terminal grounds may be preserved to the company for the uses designed, not converted to private uses for warehouse property on which it will hereafter have to pay rent to its former directors and their heirs and assigns forever.

Another item of much less amount than that last mentioned which might be profitably investigated, rather perhaps as illustra-

tive of the methods of these people and the character of these annual reports on the presumption of the accuracy of which, Congress is asked to act, relates to one of the sinking funds of the Central Pacific Company, and the story as derived from the reports themselves is about as follows:

When Messrs. Huntington and associates commenced the railroad business, being somewhat inexperienced, they appointed trustees to manage their sinking funds, and for the Central Pacific Land-grant mortgage of 1870, two gentlemen were named of known responsibility and wealth. Probably requiring some little time to attend to their own affairs, and as the accounts of the land sales, bonds, redemptions, etc., were kept in the railroad company's office, and everything ran smoothly, they appear to have imitated the great Grecian poet, and to have *nodded*—just for a moment. During this moment of somnolence some one, more vigilant than they, got away with no less than \$2,500,000 of the money belonging to the sinking fund! The trustees of course awoke in time, and there was probably a disturbance, or at least an *eclaircissement*. Of these particulars we are not informed, but the published reports disclose that a settlement was reached in pursuance of which the Central Pacific Company gave to the trustees of the Land-grant mortgage its five notes for five hundred thousand each, payable in one, two, three, four, and five years, with interest at four per cent. per annum, to supply the deficit. (Vid. Rep. of 1891, p. 100.) These notes were sacredly “pledged the redemption of the bonds,” as the money they represent was pledged before it was eloigned; and as the bonds drew six per cent. interest, and the notes but four, the equitable consideration extended by the creditors to the gentlemen who had taken their money, and the profit made by the latter by the transaction, may be readily calculated. What is unexplained about the settlement is that the notes were executed by the Central Pacific Company, yet the next page informs us (and subsequent reports confirm the statement) that the interest on these notes is paid by the Southern Pacific Company! If the Central Pacific Company did not get the two and a half millions of principal taken, why did that company give its notes for the amount? And if it did get the principal, why does the Southern Pacific (which is not strictly a benevolent institution) pay the interest? These are *queries* which probably none but Mr. Huntington himself can answer. The facts indicate crookedness.

Other objections to the proposed extension of time which time forbids us to dwell on, are:

V. The fact that such course necessarily involves a prolongation of the life of the Central Pacific Railroad Company, which is a California corporation for many years beyond the legal term of its existence, without reasonable necessity for such action, and distinctly against the will and protest of the people of the State, from which it derives its life and being. We are not disputing the power of Congress for federal purposes to do such an act if in its judgment necessary, but without necessity it should not be done. Independent of the overriding of the authority of the State government over its own creature, such an act will create a body politic without any defined limitations on its corporate powers, or any law governing its methods of proceeding, its rights with regard to its shareholders or their liabilities, and the charter of which could not be forfeited by any court, State or Federal,

no matter how gross its offences. No State court could interfere because the concern would be a Federal corporation; and no Federal court could act because the United States have no statute on the subject.

VI. This Central Pacific Company under its past and present management has come to be the most odious and detested corporation that has probably ever been known, and this "for reasons, capital, confessed and proved." It has invented and put in force more, and more different modes of vexations in transportation, than probably any other in the world, and *we* have always been the sufferers. At one time goods ordered from Eastern points for the interior of California or Nevada, on the line of the road, had to be hauled to San Francisco and back to destination, to swell the cost. By special favor and on payment of the whole freight both ways, the interior merchant might obtain permission to have his goods delivered as they passed his door. At another time they imposed a protective duty of a cent a pound on refined sugars coming here from the east, and, as believed, for a consideration of \$100,000 paid by parties interested. The charge was publicly made* at the time by responsible parties and never denied. Silence under such circumstances amounted to an admission. At another they introduced here a system of special contracts to be enforced by boycotting,† which if long continued would infallibly have riven our community into two hostile factions. This infamous and doubtless illegal special contract system was broken up by the construction of competing roads, but by their system of leases they undoubtedly aim to revive it. By their omnibus lease and the lease of the Central Pacific road, they have united practically all the roads in the State under the management of a foreign corporation which in turn is under the control of a single individual, whose greed has no limits and who avows that he has no other or higher standard of right than his own opinion. He has never made public his general code of morals, if he has any, but in letters to his former associate he exhibits his ideas on procuring congressional legislation, to be in brief, to bribe those who will accept and vilify those who will not.

By this combination they, for years, simultaneously withheld payment of railroad taxes, unhinging the machinery of the State Government and throwing the public service out of gear. Public schools closed, supervisors, legislators and executive officers bribed, injunctions defied, and all this under the pretence of ascertaining the constitutionality of an enactment procured by themselves and passed for their benefit. When however the opportunity of a decision presented itself fleeing from the ordeal. A history of all these offences would unduly expand this memorial, and they must be passed over with mere mention. But the tax litigation was so grievous an injustice to the State, and the dishonorable and collusive manner in which it was managed are so susceptible of, record proof that we give it briefly, as follows:

Thirteen Years' Litigation over a Scheme of Taxation Enacted at their Own Suggestion and for their Benefit—Collusive Suit—Impositions Practiced on U. S. Courts—Etc.

In 1879 a provision was incorporated in our State constitution, excepting railroad mortgage bonds from the general rule for taxing moneys invested on mortgage. It was done at the instance of the railroad

* See *The Nation* (N. Y.), December 8, 1881, pp. 452, 453.

† For details, see *The Nation* (N. Y.), August 11, 1884, pp. 113, 114.

See this pamphlet, pp. 25-29.

people themselves, to enable them to sell their Southern Pacific bonds, which, if subject to local taxation in California, would obviously have been impossible. The measure was introduced in the convention by Mr. Henry Edgerton, one of their standing counsel; stated by him to be satisfactory to his clients, and passed without amendment, *nem. con.* The taxes of 1880 having been levied under it, the companies refused to pay, and when suits were brought they removed them to the Federal court, claiming that the exception thus enacted at their own instance was in conflict with the 14th amendment of the United States Constitution. They affected a wish to waive all other controversy and try this constitutional question only. To secure control of the litigation, they procured a collusive suit to be brought by the Supervisors of San Mateo County (to whom they loaned the amount of the county taxes, on terms evidently corrupt on their face) in which the facts were admitted by demurrer, in a shape presenting apparently a case of hardship so great, as to lead the Circuit Court of the United States to decide in their favor. The false coloring given to the facts was then exposed in the press, and attracted the notice of the Judges of the Supreme Court, who when the case came before them, declined to decide it in the shape presented, and desired the facts developed by a trial and proofs. Several other cases were then tried contradictorily and appealed, all of which were determined on other grounds, petty quibbles of a trifling character, and without touching the great Constitutional question which had been made the pretext for their removal from the speedier adjudication of the State Court. Finally years having gone by; and the Supreme Court having in the course of this experience become acquainted with the whole matter, intimated its readiness to decide the San Mateo County case, if the parties would resubmit it. But as may be seen from the opinions of the court below and the argument of Mr. Roscoe Conkling, on the appeal, their main reliance in the support of the constitutional objection was the extreme hardship of the case, as presented on demurrer, and that mask having been torn off by the development of the actual facts, a decision by the Supreme Court became the last thing the railroad people wanted. The adversary which had been so obliging as to commence and prosecute the suit with the money in its own treasury, and *lose it*, was equally obliging and compliant in the matter of the appeal; the San Mateo supervisors promptly telegraphed to Washington, a dismissal of the writ of error, which the Supreme Court allowed. Then the State itself brought a suit wherein this Constitutional question was presented alone. It also went to the U. S. Supreme Court on appeal; but again they frustrated a decision by paying the tax and penalties in full, just in time to oust the court of jurisdiction, by destroying the subject of controversy. There is no honesty or good faith in them. The controversy lasted in various forms from 1880 to 1893, when the Legislature after an appeal by joint resolution to the Supreme Court to advance the pending case, finally from mere weariness and despairing of a decision on the merits passed an act for re-assessing the roads. The railroad combination was stronger than the State; they now ask Congress to strengthen them still further by a congressional charter with undefined (and therefore unlimited) powers and by reserving its whole policy on Pacific roads for a century to come. See,

San Mateo County *vs.* Railroad Company, 8 Sawyer's C. C. Repts., 228.

San Mateo County *vs.* Railroad Company, 116 U. S. Rep., 136.

San Bernardino County *vs.* Railroad Company, 118 *id.*, 417.

Santa Clara County *vs.* Railroad Company, *id. ib.*, 394.

S. P. R. R. Company *vs.* California, *id. ib.*, 109.

Laws of California, 1893, pp. 290 and 618.

California *vs.* Railroad Company, 149 U. S. Rep., 308.

Railroad *vs.* California, 162 U. S. Rep., 91-167.

California *vs.* Railroad, 105 Cal., 576.

The detailed history of this episode is presented for the information of any interested in an appendix hereto.

Goaded by provocations such as those here adverted to,—and they are but specimen cases to which similar ones are of constant occurrence,—the people of California have long looked forward to the expiration of the charter of the Central Pacific road, for delivery from this body of iniquity, *at least for their children*; and on their behalf we respectfully and earnestly entreat Congress not to pass any act which will continue down to the coming generation any part of the offense, outrage and oppression which we have endured from this iniquitous combination now called the SOUTHERN PACIFIC COMPANY. Deprived of the management and power to continue to plunder the Central Pacific road, it can hardly fail to go to pieces and relax its grasp on the vitals of our State.

It may almost be said that all the known operations of the Pacific railroad management in this State are saturated with fraud and dishonesty which recur at every turn of their proceedings.

Defrauding the Government and the Public by Failure to Build the Road Contracted for—The Contracts Entire.

Take for example the construction of the Southern Pacific road, of which we have spoken above. Its map, which preceded construction, showed a road from San Francisco southwards through the Santa Clara Valley, to a point where it was to commence the ascent of the pass over the Coast range after crossing, which chain of mountains it was to extend through the upper San Joaquin Valley, and so on to the State line on the Colorado River. To aid in the building of this road, they obtained a land grant of over ten million acres. The road was designed by congress to be a competing line to the Mississippi river and to connect the two richest valleys of the Pacific Coast, and its finest Sea port, by an independent and continuous line of rail with the waters of the gulf of Mexico. No object less important could justify the extravagant bounty of Congress, and evidently from the nature of the object and the means adopted, *the contract was an entire one*. The whole road mentioned was to be built for the whole subsidy. Of the road to be furnished about a hundred to a hundred and fifty miles were devoted to crossing the pass in the coast range and thus connecting the two valleys and five hundred or so ran through them, over a soil as rich as possible and as level as the beds of the rivers that drained them. It was not for building through this valley country that Congress offered its bounty; that constituted no part of the inducement, for these very parties had already built a hundred and fifty miles of road up the San Joaquin, for the profit derived from building it at \$26,000 a mile and bonding it for \$40,000 and they were going further. The consideration for the land grant was the construction of the road over the mountain pass which was highly important from military as well as commercial considerations.

For this the bounty was offered and the difficult character of the work was its justification. What did these honest gentlemen do? They built the valley parts of the road on both sides of the pass, and drew and alienated the rich land fronting on it, leaving the connecting road from Tres Pinos to Alcalde (some 100 miles) unbuilt and it so remains to day. And this omission was no accident or afterthought, but intended from the first; Charles Crocker writes to Colton his partner, under date of February 12th, 1875 (Colton Transcript, p. 1621), and after referring to a suggestion of Colton's to "build 20 or 40 miles on the east side of the San Benito pass, and then go to Congress for a change of line," says: "We intend to build from Goshen to Los Gatos close up to and into the eastern base of the mountain to a coal mine there; *and we have never intended anything else* and no portion of the old line will remain unbuilt, except that through the mountains, about 50 miles," etc., (it is in fact 100 miles.) * * * * "I had supposed that that you fully understood this; *Huntington does understand it.*"

This being so, on their own confession made as early as 1875, what sort of faith were they practising when they solicited and accepted from Congress a land grant of over ten million acres of rich valley land as the price of doing this work, which they confess they never intended to do? Is this the sort of good faith Mr. Huntington is using in treating with Congress to-day? Are his present representations and promises to be measured by it? It certainly appears to satisfy the standard of morals he proposes for his conduct in his sworn examination before the Senate committee shown in Senator Morgan's report, page 173.

Out of one wickedness proverbially springs another, and "bad begun makes strong itself by ill." This truth is illustrated in the present instance by an imposition on the financial public as wicked as that practiced on the Government. In building the Southern Pacific road mortgage preceded construction, as already shown, and the mortgage of 1875 covered as we have said the whole road in this State, existing and contemplated, from San Francisco to the Colorado river.

The route being afterwards opened for through traffic, the holders of Southern Pacific sixes of 1875 placidly repose in the belief that their bonds are a lien on the continuous traveled road, the "through line." This is a mere dream; their mortgage is on two distinct roads: the one from San Francisco to San Miguel, the other from Alcalde to Fort Yuma, and these are separated from one another by the mountain chain above mentioned, the pass over which rises to 1,934 feet above tide, to build over which will cost not less than six millions! Without such connection the two separate roads are of but trifling value compared to the amount of the mortgage bonds, and the latter are a fraud on the public. There are about thirty-two millions of them outstanding!

In nearly similar plight are the bonds of the same concern last issued, called "First consolidated fives of 1893." That mortgage is a first lien on fragmentary roads leading practically from no place to no place, and useless without other roads which are otherwise mortgaged. These are practical examples of Mr. Huntington's moral standard.

Again; take the matter of terminals, one of extreme importance to every railroad, and specially so to one of considerable length. The State, twenty-eight years ago (1868) granted sixty acres in the city of San Francisco, to the two Pacific roads, for terminal purposes; and by the closing of streets this area has since been enlarged to a hundred acres. The only use to which in these twenty-eight years they have

put these terminal grounds, is to mortgage them for \$16,000,000. The real terminus in San Francisco is and has been for twenty years past, at the corner of Third and Townsend streets, on a block of ground 825 x 550 feet, *belonging to the Southern Pacific Company (of Kentucky)*. The same concern owns the adjoining blocks used for the receipt and delivery of freight. Not a square foot is owned by either of the railroad companies that use it. No rent is found charged for these premises, in their reports or anything to indicate that they do not own the land, a fact the knowledge of which might alarm bond holders. But whenever the mortgagees foreclose and make title to the railroad entering San Francisco, the purchasers will succeed only to the right of way and track, along the public streets as far as the corner of Fourth and Townsend streets, where a gate on the line of the Southern Pacific Company's property will shut them out of the terminal grounds and compel them to discharge their freight and passengers on the public street, and then back the train a mile or two to the nearest turn-table to enable them to reverse the locomotive.

These are specimens of the way things are managed and financed by this concern, and the repeated occurrence of the like has caused those who know it best to doubt whether this Southern Pacific Company of Kentucky has ever been party to a single honest transaction.

The Central Pacific can be Reorganized on Safe and Solvent Bases, by Calling in the Sums Due it from Solvent Debtors.

The exigencies of space forbid further enlargement on this branch of the subject. Enough has been said to show the need of a thorough investigation of the relations of the Central Pacific Company to the parties who have so long held it in their grasp, and the enforcement of its just claims against them. This done it will be found that so far from being insolvent, the company can easily be reorganized as a great trunk line to the Pacific Coast, competing fairly with all others and on the basis of solvency and honest management, manifestly to the advantage of the government as a creditor and of its own stockholders. In any event the property, if it has to be sold, can be then offered with knowledge of what it consists of and what its earning capacity is—things at present absolutely unknown to any one but the Southern Pacific combination, who have for so many years past managed its affairs to its own destruction. It must not be forgotten to extend the payment or refund this debt as proposed is practically to sell the road to its present management on a credit of a hundred years, taking their promise to pay in small installments. Congress does not, nor does any of its members, or any executive officer of the United States, or indeed anybody, know what property you are selling. No inventory of it exists; and this ignorance *shuts off all competitive bidding*. It is now fairly established and undeniable that for numerous important purposes the Central route has decided advantages for through business over all others. All the products of this coast destined for Eastern points, valuable enough to pay for transportation by rail, give it the preference for climatic reasons. For passenger traffic which is 40 per cent. of the whole business,* it has

* The Central Pacific road used to furnish statements of details of through and local business, and of the amounts derived from freight, express, passengers and baggage, but since the year 1884 has withheld such information. From the printed report of December 31st, 1884, we learn that

the call over all the others—the Southern (Sunset) line is, in fact, discontinued during summer. It does not admit of doubt that each of the great trunk lines would be prompt to compete for the Central Pacific property, if offered at auction, *with inventory*. Without such it would not probably elicit any reasonable bids, for however large or valuable the property, no purchaser would be likely to count on receiving from the tenants, delivery of anything beyond the road itself, with a wretched skeleton equipment incapable of doing the business.

The stockholders of the road, who appear to have at last awakened to the necessity of enquiry into the wrongs perpetrated by their agents the directors, are organizing in defence of their property, and if they have an opportunity, will scarcely permit the trunk lines to be the only competitors at such sale. As indicated by their published proceedings, they are making intelligent efforts to help themselves and resume control of their property; they will probably effect a reorganization of the company. The people of California, so far from offering factious opposition to a reorganization which shall preserve the central road as an independent and competing line of transportation, managed by its actual owners, as designed by Congress, will heartily welcome it.

We believe that all these desired ends can be obtained by means of a foreclosure of the Government lien on the road. For this purpose, as the property lies in several different States, complete jurisdiction should be conferred on some one of the Courts of the United States, and the ordinary powers of the Court enlarged so as to enable it to ascertain and redress, in the foreclosure suit, all frauds practised on the company or its shareholders by the management or by their tools or confederates, and the application of any moneys recovered from such parties to the sinking fund in the United States Treasury. We therefore respectfully pray Congress to instruct its appropriate committees to prepare and report a bill to that effect.

We here resume briefly the grounds of our opposition to the pending measure to refund the debt of the Central Pacific Railroad Company to the United States (Senate Bill No. 2894, H. of R. Bill No. 8189.)

1. The recognition and confirmation of the ninety-nine-year lease to the Southern Pacific Company, reverses the settled policy of the United States, with respect to these Pacific railroads, as established by previous acts of Congress, and promoted by grants of the public domain of many million acres. It substitutes consolidation and monopoly for competition and freedom of trade; it gives over the Central road to the management of its great competitor in business, depriving the people of the West of the advantages of competition in transportation for which they have paid these people liberally, and Congress has subsidized them munificently.

The proposal is quite new; has never been publicly discussed, advo-

the total earnings of the year were	\$22,166,106.00
of which 74 per cent. was from local business.....	\$16,216,902.00
and 26 per cent. from through business or.....	5,949,204.00
	\$22,166,106.00

Of the through earnings—

The receipts from passengers and baggage were \$2,383,066.00 or 40 per cent.
and from freight and express..... 3,566,096.00 or 60 per cent.
The local business shows the same proportions between freight and passengers.

cated or even mentioned. It is furtively introduced in the 9th and 19th sections of the pending bill under the disguise of an advantage to the United States! In fact, it can serve no purpose but to confirm the grasp of the Southern Pacific Company on the Central road, and enable it by routing freight to starve the Union Pacific into obedience to its commands.

2. The proposed guaranty of the Southern Pacific Company is worthless; a mere illusion. That company owns no property worth speaking of which is not already mortgaged for vastly beyond its cost or value.

The Southern Pacific Company is a fraudulent and predacious concern, got up to perpetuate the control of dishonest directors of the Central Pacific Railroad Company over the road after they had sold their interest in it, and of absorbing the profits of that and other companies by means of fraudulent leases. So plain was this at its origin that *its original charter from the State of Kentucky forbid it to build or operate railroads within that commonwealth.*

3. The relief asked for the Central Pacific road is based on false suggestions and concealment of material facts. So far from being unable to provide for the payment of its debt to the government, it is possessed of assets of enormous value—collectable claims against its former directors for moneys and credits misappropriated by them, amounting to many millions. These should be called in and applied to the sinking fund. Asking indulgence here on the ground of poverty, its stockholders are receiving dividends on their shares to-day, and have the promise of their lessee and advocate that they shall be doubled as soon as the bill passes. The secrecy of this dividend, the fact that it has not been earned by the road, declared by the directors, if such be the facts, and that it is not shown on the books of the company, so far from redeeming it from the imputation of fraud, renders it more conspicuously objectionable. If this be the case, it is evidently “hush money” paid by the guilty parties to secure Congressional confirmation of the ninety-nine-year lease; and the sum agreed to be paid for it* (which is essentially a bribe to silence opposition) bespeaks the nefariousness of the transaction and the value attached to a condonation of it.

4. By passing this bill, Congress will prolong the life of this railroad company for some seventy years beyond the limit fixed for its existence by the law of the State that created it. To do this without the consent of against the unanimous protest of the State, would be not only an act of gross discourtesy to the State of California, but a grave injury and outrage to her people, who have for the past twenty-eight years suffered at the hands of these managers outrage and wrong past all endurance, rendering it justly odious and detested of all men.

5. The management of the road has been continuous from the beginning; they have shown themselves by their published correspondence among themselves to be corruptionists of the worst kind.

6. They have broken faith with Congress, by soliciting and accepting a land grant as the consideration for building the whole S. P. road a hundred or more miles of which was over a mountain pass. They

* One per cent. for 1895 (paid).....	\$ 672,000
Same for 1896 (paid)	672,000
Two per cent. each for 1897 and 1898.....	2,688,000

\$4,032,000

have taken and appropriated the valuable part of the grant, and left the difficult mountain part of the road unbuilt. Their correspondence shows the breach of faith was intended from the beginning.

7. They have broken faith with the public in the same way as with the Government; borrowed thirty-two million dollars on the undertaking to build a continuous line of rail from San Francisco to the Colorado river, and left a mountain gap of a hundred miles of it unbuilt, and have even renounced the building of it.

8. Similar frauds in the matter of terminals. They are unreliable.

9. Refunding the Central Pacific debt is wholly unnecessary. The company can be reorganized on the basis of solvency if Congress will but authorize a receiver appointed in foreclosure to avoid all fraudulent conveyances; get in the assets of the company and apply such as are not needed for transportation purposes to the sinking fund in the U. S. Treasury.

10. As seventy-five per cent. of the revenues of the Central Pacific road are derived from local traffic, and from fifteen to eighteen per cent. more from California products seeking a market abroad, and goods brought from abroad for consumption for sale here, on all of which we pay the freight, the people of California feel that all of the plunder which its former directors are permitted by Congress to retain will be saddled on them. There is little doubt that as much as from twenty-five to thirty millions can be recovered from the sinking fund from Huntington and the Crocker estate; why should they be abandoned without an effort and saddled on the people of this State?

SAN FRANCISCO, CAL., December 26, 1896.

On behalf of the people of California.

CHAS. ASHTON,	GEO. K. FITCH,	P. R. MARTIN,
JOSEPH BRITTON,	J. RICHARD FREUD,	A. MILLER,
W. M. BUNKER,	GEO. T. GADEN,	JAS. MADISON,
J. H. BARRY,	ADAM GRANT,	W. L. MERRY,
E. S. BARNEY,	H. E. HIGHTON,	G. W. MONTIETH,
J. M. BASSETT,	N. C. HAWKS,	MAX. POPPER,
T. V. CATOR,	W. W. THOMPSON,	E. A. PHELPS,
N. P. COLE,	I. J. TRUMAN,	TAYLOR ROGERS,
DR. FRANK CORNWALL,	J. C. JENS,	G. M. REYNOLDS,
W. M. COWARD,	WM. JOHNS,	C. A. SUMNER,
H. Y. COWELL,	J. C. JORDAN,	J. E. SCOTT,
H. L. DODGE,	J. LEGGETT,	C. M. SHORTRIDGE,
J. T. DOYLE,	OSCAR LEWIS,	F. J. SULLIVAN,
HON. J. L. DAVIE,	STEWART MENZIES,	L. STRAUSS,
B. F. DUNHAM,	C. A. MURDOCK,	I. UPHAM,
L. R. ELLERT,	M. McGLYNN,	HON. ADOLPH SUTRO.

The Committee of Fifty appointed by the monster meeting at Metropolitan Temple, December 7th, 1895.

ADOLPH SUTRO, Mayor of San Francisco, *Chairman*.

TAYLOR ROGERS, *Secretary*.

SUB-COMMITTEE ON MEMORIAL.

JOHN A. STANLEY,	JAS. D. PHELAN,
THOS. F. BARRY,	E. W. McKINSTRY,
JAS. M. BASSETT,	TAYLOR ROGERS,
JOHN T. DOYLE,	<i>Chairman.</i>

EXTRACTS FROM "THE NATION," REFERRED TO ABOVE.

(The Nation, August 11, 1881, pp. 113, 114.)

OVERLAND RAILROAD RATES.

TO THE EDITOR OF THE NATION :

SIR : Two paragraphs in the *Nation* of July 14 (No. 837, pp. 22, 23), indicate that you are but imperfectly informed as to abuses on the overland railroads. As you appear willing to aid in remedying them I give you some of the facts. The system of unlawful freight discriminations alluded to has not been recently revived; it has never for a moment been suspended since its formal introduction in the summer of 1878, but has been constantly enlarged and extended down to the present time, when it is more stringent and oppressive than ever before. The *modus operandi* is this: By arrangement between the Central and Union Pacific Railroad Companies the rates of Western-bound freights are fixed by the Union, and those of Eastern-bound by the Central Company. This arrangement is supposed to be nominal only; a sort of legal fiction to enable each concern to refer complaining parties to a "Mr. Jorkins," two thousand miles off; but that is the form of it. The Union Pacific Company has a printed classification of merchandise, and printed rates of freight for each class from New York and other Eastern points to San Francisco, ranging from \$6 per 100 lbs. for first-class to \$1.50 per 100 lbs. for Class D. These are declared to be the regular rates. But the Company enters into contracts with the merchants here to carry for them at *special* rates, much reduced from these regular ones, on condition that the merchant shall import all his goods by their line; not only such as are usually sent by rail or *via* the Isthmus, but also such as have heretofore, and naturally, come by sea around Cape Horn; and they make him bind himself to ship by their road, and by such connecting roads as their general freight-agent shall, from time to time, designate, all goods purchased by or for him, or shipped by or consigned to him, by his procurement, directly or indirectly, or with his knowledge and assent. The contracts declare that their object is to give to the Union Pacific Company the transportation of all goods *bought, sold, dealt in, or handled by* the merchant; and any act of his tending to defeat this object constitutes a breach, so that he cannot even buy in open market goods imported otherwise than by rail; and this rule is enforced. They also provide that these special rates are for his own exclusive benefit, and he must not allow the use of his name or shipping marks by any one else. The freight must all be forwarded to Omaha by such carriers as are designated by the Union Pacific Railroad Company. They reserve the option (which is always exercised) of way-billing the goods and collecting freights according to the printed rates, agreeing to return the difference, on presentation of vouchers to the Central Pacific freight-agent at San Francisco, after the lapse of a reasonable time—say thirty days—for transmission, verification, etc.

All our leading merchants have been forced to enter into contracts of this description; the man who attempts to import his coarse goods by sea, relying on the rail for such as need more rapid transportation,

has to pay such rates on the latter that he cannot compete with his neighbors. He cannot even buy his coarse goods in open market here if they shall have come round the Horn, for that would defeat the "*bought, sold, dealt in, or handled by*" clause. Such goods and their importers are tabooed and "boycotted," and the merchant who touches them without leave of the railroad company can have no freight transported overland except at ruinous rates; even at such he is liable to casual delays, difficulties, and obstructions which, being unable to account for, his unregenerate nature attributes to malicious design.

The result is that ships obtain little or no freights from Eastern ports here; they have to come here in ballast, or half full, to load wheat for Europe, and our people are compelled to pay on their produce sent abroad a freight to cover the expense of the round trip. The standing forced loan exacted from our merchants, without interest, by collecting and after thirty days repaying the difference between printed and contract rates, may amount to half a million dollars; it operates oppressively to individuals, but to the community is of minor importance. But the tax levied on our exports in the form of enhanced freights to Europe is a monstrous and shocking wrong. In the absence of full statistics it is impossible to compute its amount, but it is probably equivalent to about four dollars per ton on the exportable crop of the State. San Francisco, under this nefarious system, has degenerated from the rank and position of a maritime city open to the commerce of the world to that of an interior town some two thousand miles west of St. Louis, approachable only over deserts and mountains.

With these facts before you, which are known to every well-informed man in San Francisco (except, of course, the Railroad Commissioners), you can understand why the tide of prosperity which has spread over the rest of the Union during the last few years has never yet reached California, why all business has been depressed and real estate has been steadily falling in value ever since the overland railroad was completed. Perhaps, too, you will regard with more leniency the mistaken hostility to corporations (especially railroads) which has found expression in some of our recent legislation. Grant that it is unphilosophical, ill-directed, stupid, and in some respects unjust—that was not its intention; but people who have been so long and sorely oppressed as ours have been by the present monopoly cannot always reason coolly or justly as to the remedy, and in their anger seize any weapon at hand careless whom else they may hurt, provided they can inflict a blow on their chief enemy.

You suggest an appeal to the courts—at least, so I understand your words "proceed against with all vigor;" but who can proceed against them, and how? I defy any lawyer to point out a remedy, under existing laws, of the slightest value to the individual aggrieved. Our Railroad Commissioners, if so disposed, could doubtless do much on behalf of the public, if not to break up, at least to expose the wrong. But the eyes of justice, you know, are bandaged, and they can only know what is officially communicated to them and duly proved by witnesses, and their governing majority has just completed a set of rules for proceedings before them well calculated to aid them in remaining ignorant of all public abuses of the kind. No individual merchant dare sue, complain, or even let it be known that he is dissatisfied, lest he should be straightway put at a ruinous disadvantage with his competitors in trade. His business would be broken up before he could get his first case set for trial, and his family might starve

while he was awaiting the result of new trials and appeals. The way of a man who enters into litigation with a company that keeps all the leading law-firms under standing retainers, most of the leading journals by some means quieted, and which finds in legislators, railroad commissioners, and auditors of railroad accounts its serviceable friends, is too hard to be voluntarily pursued by any man in business.

There is but one remedy for this monster grievance which oppresses the whole Pacific Coast. The power so to oppose must be absolutely taken from the companies. For this purpose it is not necessary to establish rates of freight by law; but the law should lay down a rule for their establishment by the companies, and, once established, they should be made public, and no deviation permitted. The organization of the roads in all their departments should be kept under constant and vigilant supervision by government, and any violation of law by railroad officials should be punished as a public offence. Actions for damages and like private remedies are wholly inefficient. Congress has ample power to remedy all evils in the overland system of transportation, for it is all built on Congressional legislation; and its just control of that system, judiciously exercised, could not fail to be attended with most beneficial results in the whole system of connecting roads.

The first thing needed is a Congressional committee of investigation, with ample powers and means to examine thoroughly into all existing abuses in the management of the Union and Central Pacific roads, and their leased and associated lines. The *Nation* cannot do a better public service than by aiding and enforcing through its columns the demand for such an investigation.

SAN FRANCISCO, July 28, 1881.

JOHN T. DOYLE.

(*The Nation*, December 8, 1881.)

OVERLAND RAILROAD RATES.

TO THE EDITOR OF THE NATION:

SIR: Since the publication of my letter on overland railroad rates in the *Nation* of August 11, Mr. Charles F. Adams, Jr., has called my attention to the origin of the system of special freight contracts and unlawful discrimination in freight charges, as set forth in the report of the Government Directors of the Union Pacific Railroad for the year ending June 30, 1878. I quote from page 15 of the document:

"In the month of July last, a sudden announcement was made that the tariffs on through-freighting business over the Pacific roads had been altered, and that, while the classification of certain articles had been changed, the rates upon others had been advanced from 50 to 100 per cent. The reason of this movement, which naturally excited surprise as well as indignation among those affected by it, was not at first apparent. It was, however, soon learned. It was purely strategic. The company did not really propose to raise its tariff rates; on the contrary, it was ready to slightly reduce them; but it did propose to take full advantage of its position to secure as much as possible of the transcontinental business. As a first step toward this, it practically did away with its open tariff, by the very simple process referred to. Under the open tariff, at the old rates, the larger business firms dealing between the two coasts had a choice of routes—that by water and that by rail. They, in practice, availed themselves of this option by sending their coarser freights, or those in regard to which time in delivery was immaterial, by water, at the lower rates; while the more costly wares, or those requiring immediate delivery, were forwarded overland. The object of the Union Pacific was to put a stop to this practice. This they did by largely raising their freights, which put an effectual stop to shipments under the open tariff, while, at the same time, they offered to all the large firms which would contract to make their shipments wholly by land, special rates at a reduction even

from those in force before the change. It was thus a distinct step backward; for it amounted to the abandonment of a published and open tariff in favor of a system of private special contracts.

"This move was, therefore, not only one of great importance, but it was open to serious objections. It was made, not by a petty local road, nor by a competing trunk line, but by a great, subsidized, continental thoroughfare. As such, it might naturally be inferred that it was made only after ample consideration, and with the authority of the full board of directors. It is, however, a fact singularly illustrative of the absence of that sense of public responsibility in which the policy of the Union Pacific is now shaped, that this measure, which practically put in irons the transcontinental business of the country, was devised by two freight agents, was never, before being publicly announced, submitted for consideration even to the executive committee of the board of directors, much less to the full board, and was finally put in force, to the utter surprise of the public, on the verbal authority, so far as can be ascertained, of the president and a single director.

"It is unnecessary to comment on such a method of corporate management. It speaks for itself. Meanwhile, so far as the measure is concerned, the objections to it are apparent. The through-business over the Union Pacific is mainly done by large houses. This is natural enough, for such houses can, of course, do it most cheaply. The measure under discussion, however, made it impossible that this business should be done by any but the large houses. They have special contracts covering it at less than the published tariff rates. More than this, it locks up, in secrecy, transactions which more than all others should be public. The special contracts may be equal as between shippers, or they may not. The directors have every reason to believe that they are, but they none the less are lacking in that element of publicity which in such matters will always remain the one real safeguard against discrimination."

The contracts here referred to and so justly condemned did not contain the "boycotting" clause quoted in my former letter; they merely bound the merchant to transport all his freight by rail—viz: "all goods purchased by or for, and shipped or consigned to him by his procurement, directly or indirectly, or with his previous knowledge or consent;" he was still free to deal in goods which had reached here by sea, though he could not import them so himself. Next year or the year following, the "bought, sold, dealt in, or handled by" clause was introduced, which "boycotted" all goods not imported by rail, so far as the railroad companies' customers were concerned. *They were forbidden to buy, sell, deal in, or handle them.* Last January the railroad companies gave another turn to the screw, and introduced a clause which boycotts not only the goods, but the importers. The merchant who holds a freight contract with this company is "*firmly bound not to sell or deliver goods to anyone who is in the habit of importing otherwise than by rail.*" To show that there is no mistake about this humiliating exaction, I enclose on a separate slip the text of the covenant, as well as that of the corresponding clause in the contracts of the preceding year. They are clipped from the columns of the *Grocer and Country Merchant*, a local trade journal which published them, with a vigorous protest, at the time they were forced upon our merchants. The space of the *Nation* is too valuable to insert them *in extenso* here; but let them go into your advertising columns with a note of reference. They divide the importing merchants of the whole Pacific Coast into two classes—viz.: those who bind themselves to import exclusively by rail and those who refuse to do so; *these two classes are forbidden by the railroad company to have any dealings with one another.*

I make no comment on this proceeding, for I have no language equal to it; but I hope that the *Nation* will do so, for I have reason to believe that it will not be without effect. I pass to another item of railroad management.

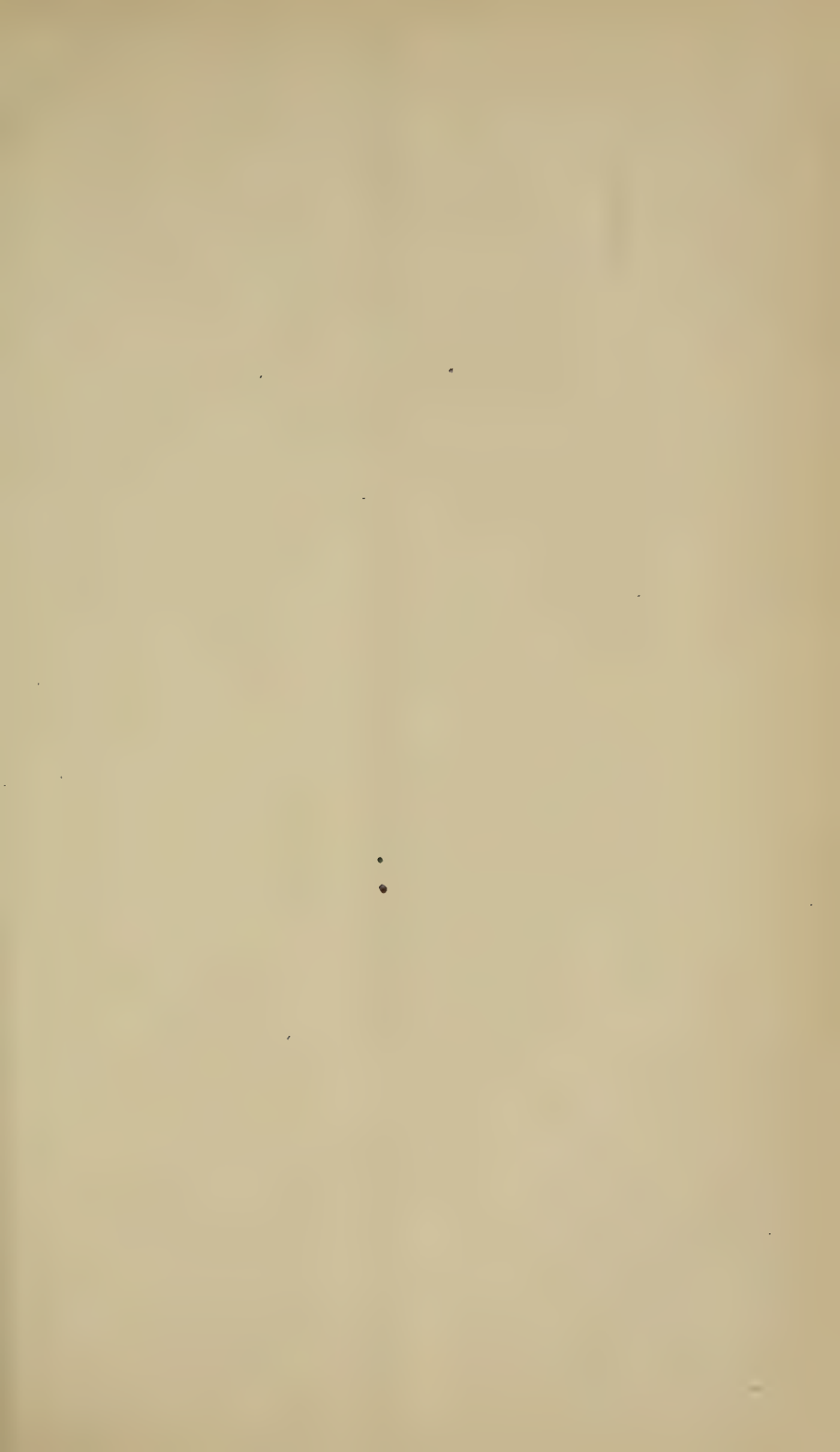
Sugar refining was introduced here in 1855, and soon grew to be a large and important industry. Even paying duty on raw stocks imported from Manila, it was found possible to manufacture here at a

profit, and compete with Eastern goods to the extent of the refined sugars and syrups consumed on this coast. The price was, of course, regulated by the cost of laying down New York sugars here. The Hawaiian treaty removed the duty from our raw stocks, and gave our refiners a clear advantage of two and a half cents per pound over their Eastern rivals. Still, Eastern crushed sugar had a slight preference, and could always be found in our market and at substantially the same price as domestic. Last January all this suddenly changed, and Eastern sugars disappeared from the market. The reason assigned was that the railroad companies had raised the freight on refined sugar from one cent per pound to two—a rate which forbade importations. The reader may be surprised that they should thus impose a protective duty (for that is evidently what it is) so high as to cut off their own revenue from the trade; but, though strong protectionists, they are not such fools as that. It now comes out that they received a full consideration for their action. The *Chronicle* of this city has brought out the fact, and it is uncontradicted, that the advance in freight is the result of a bargain with the principal refiner here, thinly disguised under the form of a transportation contract,* whereby, for a consideration of \$100,000, they consent to impose this prohibitory duty on Eastern sugars for the current year. The *Chronicle* publishes statistics of sugar imported from the islands, etc., to show that through the operation of the treaty the Government loses about two million dollars per annum, while by the action of the railroad companies the people of this coast are mulcted about eight hundred thousand more in the enhanced cost of sugar. Its attack is mainly on the treaty and the refiner. Papers in the opposite interest defend the action of the railroad companies by the usual protectionist arguments, encouragement of home industry, etc. The whole public is, however, as it seems to me, more interested in a question back of this, and which I venture to think lies at the bottom of the whole railroad problem—viz: *What right has any railroad company to impose a protective duty on sugar or any other commodity imported from one State into another?* And what is the system of classification adopted by all our railroad companies as the basis of freight charges, but a system of protective duties under another name? The overland companies, by their scandalous imposition of this duty on sugar, have brought this question squarely to the front, and incidentally suggested the true remedy for such abuses. The latter, if you will permit, I should like to discuss hereafter.

JOHN T. DOYLE.

SAN FRANCISCO, November 23d, 1881.

* The transaction is alleged to be in the shape of a contract to transport for the refiner 5,000,000 lbs. of sugar at two cents per lb. Of course they could not charge any dealer a less rate than that voluntarily paid by so large a customer, who pays his freight and is not at all particular as to the transportation of the goods!



In these days of low rates of labor and material prices are inflated. Tonnage rating of locomotives offers greatest economy in railroad operation.
B. A. WORTHINGTON

November 17, 1900.

No. 7

OFFICIAL PROCEEDINGS

OF THE

Pacific Coast Railway Club

111

Meeting at

SAN FRANCISCO, CAL.

Contains—PAPER

TONNAGE RATING OF LOCOMOTIVES,

By B. A. Worthington.

ANSWERS TO QUESTIONS:

Copper for Fire Boxes and Patches,
Methods of Locomotive Firing,
Economy of the Compound Locomotive.

DISCUSSION:

Train Delays and Their Causes.

Next Meeting, Dec. 15, 1900

At Sacramento, Cal.

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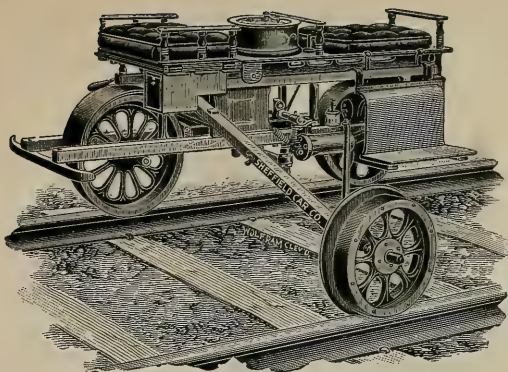
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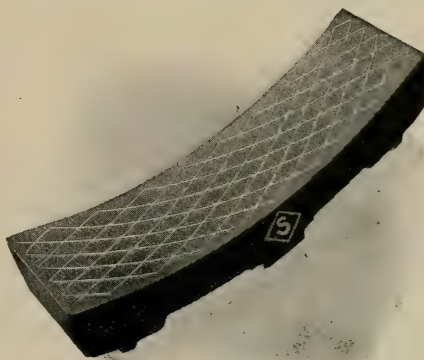
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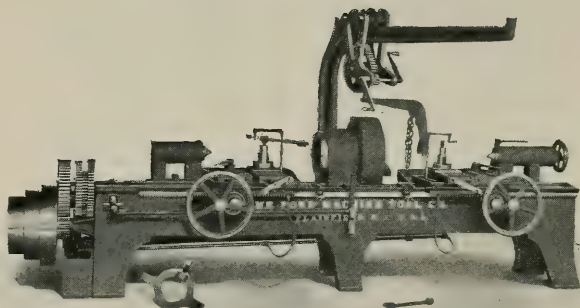
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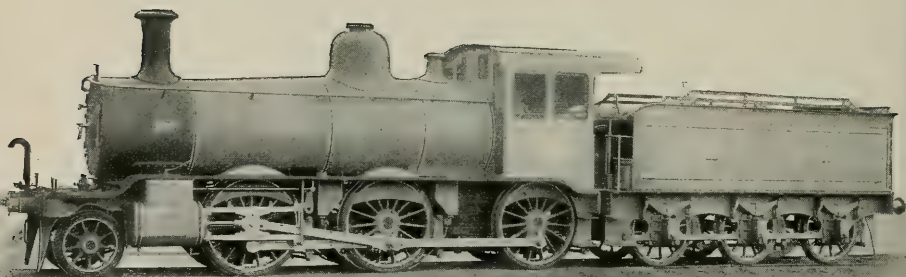
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A. M. WHITE, Supt.; J. E. SAGUE, Mec. Engineer.

OFFICIAL PROCEEDINGS

PACIFIC COAST RAILWAY CLUB.

MEETING OF NOVEMBER 17, 1900.

VOL. 2.

No. 7

Contains:

A PAPER: "Tonnage Rating of Locomotives," by B. A. Worthington.

Answers to Questions.

Copper for Fire Boxes and Fire Box Patches.

Methods of Locomotive Firing.

Economy of the Compound Locomotive.

Discussion:

"Train Delays and Their Causes."

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Northwestern Railway, Tiburon, Cal.

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N. H. FOSTER, Manager's Assistant, S. P. Co.,
San Francisco, Cal.

J. H. WALLACE, Engineer M. of W., S. P.
Co., San Francisco, Cal.

CLUB MEETS ON THE THIRD SATURDAY OF EACH MONTH.

The regular meeting of the Pacific Coast Railway Club was held at the Palace Hotel, San Francisco, November 17, 1900.

The meeting was called to order by Mr. W. S. Palmer, First Vice-President at 8:30 P. M., the following members and visitors being present:



MEMBERS.

Agler, James
 Ahern, T.
 Amann, W. E.
 Bair, D. H.
 Borton, C. C.
 Brassill, J. K.
 Breck, F. B.
 Burke, C. A.
 Burt, F. L.
 Calderwood, D. B.
 Carman, F. V.
 Cornish, T. H.
 Crocker, H. A.
 Crossman, J.
 Dillen, J. E.
 Dooly, F.
 Engels, H.
 Englebright, H.
 Flynn, P. J.
 Foster, N. H.
 Fowler, W. E.
 Frazer, H. C.
 Frentress, O. F.
 Gibson, C. L.
 Gilbert, E. A.
 Glass, H.
 Goodwin, G. H.
 Gray, T. H.
 Hack, J. J.
 Hale, G. S.

Hale, H. H.
 Heffron, T. N.
 Hunter, W. A.
 Ingham, G. H.
 Irish, C. M.
 Kaufman, C. B.
 Kellogg, D. P.
 Larson, M. W.
 Latham, Geo.
 Lemay, Z.
 McKenzie, C.
 McRae, D. D.
 Martin, J. C.
 Milner, C. H.
 Myrick, J. B.
 Norton, W. H.
 O'Leary, T.
 Palmer, W. S.
 Parker, W. O.
 Pearl, C. G.
 Quibell, C. B.
 Rowan, M. C.
 Russell, W. H.
 Searls, N. Jr.
 Stensrud, A.
 Ten Eyck, Wm.
 Towne, B. A.
 Turner, J.
 Worthington, B. A.
 Worthington, W. A.

Total, 60.

VISITORS.

Bell, J. V., American Steel Foundry Co., Houston, Texas.
 Bull, W. F., Clerk, General Office, S. P. Co., San Francisco, Cal.
 Burke, W. H., Clerk, General Office, S. P. Co., San Francisco, Cal.
 Christensen, C., Machinist, S. P. Co., Oakland, Cal.
 Clark, W. E., Sales Agent, Continuous Rail Joint Co., Newark, N. J.
 Corrigan, C. S., Draughtsman, S. P. Co., San Francisco, Cal.
 Floathe, S. M., Machinist, Mare Island Navy Yard, Vallejo, Cal.
 Haight, H., Machinist, S. P. Co., Oakland, Cal.
 Hesse, W., Machinist, S. P. Co., Alameda, Cal.
 Magee, T., Clerk, M. of W. Dept., S. P. Co., Oakland, Cal.
 Reese, E. L., Manager, B. & B. R. R., San Francisco, Cal.

Total, 11.

THE CHAIRMAN: The meeting will please come to order. The first in order is the reading of the minutes of the previous meeting, but as these have been printed and placed in the hands of the members this will be dispensed with, and they will be approved as printed if there are no objections. Hearing none, it is so ordered.

The next in order is the announcement of new members and reception of application for membership.

THE SECRETARY: Of the applications presented at the last meeting, the following have received the approval of the Executive Committee, and these applicants are therefore members of this Club:

Burnham, John	Petrie, C. R.
English, Richard	Pippitt, G. H.
Estes, L. W.	Quibell, C. B.
Fowler, W. E.	Sheasby, W. H.
Glass, Hamilton	Slater, W. W.
Hall, James	Strover, H. F.
Hibbs, F. N.	Sweeney, T.
Isaacs, J. D.	Vaughn, R.
Norton, W. H.	

The following applications have been received:

Beal, F. D.	Foreman, Wood Preserving Works. S. P. Co.	West Oakland, Cal.
	(Proposed by F. V. Carman.)	
Bell, J. V.	American Steam Foundry Co.	Houston, Texas.
	(Proposed by H. Engels.)	
Bordwell, F. A.	Asst. Engineer M. of W., Western Div. S. P. Co.	Alameda, Cal.
	(Proposed by F. V. Carman.)	
Bruce, Henry	Foreman Ship Yard, S. P. Co.	West Oakland, Cal.
	(Proposed by F. V. Carman.)	
Dickson, Geo.	Foreman Carpenter, S. P. Co.	West Oakland, Cal.
	(Proposed by F. V. Carman.)	
Gibbon, T. E.	Vice-President, L. A. T. Ry.	Los Angeles Cal.
	(Proposed by C. B. Kaufman.)	
Klink, G. T.	General Auditor, S. P. Co.	San Francisco, Cal.
	(Proposed by H. W. Ball.)	
Lloyd, F. F.	1st-Asst. Eng'r, Western Div., S. P. Co.	Oakland Pier, Cal.
	(Proposed by F. V. Carman.)	
McKenzie, K.	Foreman Carpenter, S. P. Co.	West Oakland, Cal.
	(Proposed by F. V. Carman.)	
Morrison, E. C.	Roadmaster, S. P. Co.	Tracy, Cal.
	(Proposed by F. V. Carman.)	
Murphy, J. J.	Foreman Tinner, S. P. Co.	West Oakland, Cal.
	(Proposed by F. V. Carman.)	

Rice, Judson	Engineer's Assistant, S. P. Co. (Proposed by F. V. Carman.)	San Francisco, Cal.
Rudech, M. L.	Foreman, Pintsch Gas Works, S. P. Co. (Proposed by F. V. Carman.)	West Oakland, Cal.
Stratten, G. D.	Asst. Eng'r Western Div., S. P. Co. (Proposed by F. V. Carman.)	West Oakland, Cal.
Toy, W. J.	Road Foreman of Engines, S. P. Co. (Proposed by E. A. Gilbert.)	Ogden, Utah.
Whitmore, W. W.	Machinist, S. P. Co. (Proposed by R. Yates.)	West Oakland, Cal.
Williams, F. D.	Foreman Ship Joiner, S. P. Co. (Proposed by F. V. Carman.)	West Oakland, Cal.

THE CHAIRMAN: These applications will be referred to the Executive Committee for approval, and printed in the proceedings of this meeting.

The next in order is unfinished business.

THE SECRETARY: I do not know of any unfinished business, Mr. Chairman.

THE CHAIRMAN: The next is reports of committees. I think that there is a committee on Lead for Locomotives. The chairman of that committee, Mr. Stillman, is not with us this evening, but Mr. Russell, one of the committee is here and perhaps can say what has been done.

MR. W. H. RUSSELL: I will say that the committee has not yet got together to make a final report, but a test has been made by Mr. Stillman and two assistants. The indicator cards have been printed, and we have arranged to show them tonight by the stereoptican. We are not prepared to make any further report than that shown by these cards. If there are any questions that anyone wishes to ask, we will endeavor to answer them.

A number of Engine Indicator Cards were here shown on the screen. These will be printed at the time the final report is submitted.

THE CHAIRMAN: Is there any new business, Mr. Secretary?

THE SECRETARY: I do not know of any, Mr. Chairman.

THE CHAIRMAN: The next in order is the opening of the Question Box and Presentation of Answers to Questions.

QUESTION BOX DEPARTMENT.

Question No. 21. "Should the pooling of locomotives, on roads where it has been given a fair trial, be considered as a temporary expedient to be resorted to when there is a shortage of motive power, or ought it to be looked upon as a permanent institution; in other words, do the recognized advantages outweigh the well understood disadvantages of the system?"

QUESTIONS ANSWERED.

Question No. 2. "What is the experience of those who have used copper for fire boxes and fire box patches? Should the first cost of material be considered in the construction of fire boxes if the best material will last 25 per cent longer than cheaper material?"

Answer. The first to be considered are the causes of the defects and the requirements of the material to overcome them. The defects are mostly cracks, caused by the uneven distribution of heat over the sheets; thereby causing uneven expansion, which causes the sheets to buckle. When the sheets cool, the buckles regain their normal condition. It is due to this buckling and unbuckling that the sheets break or crack.

In steel boxes where the minerals in the water eat holes, this action of expansion causes the sheet soon to crack in the weakened places. Here copper would be preferable to steel, because the verdigris, which forms on copper, would re-act on the minerals, preventing the corrosion which helps to weaken steel sheets; and it being more flexible will not crack so easily by buckling and unbuckling. But steel fireboxes have the advantage in the high pressure engines on account of its greater tensile strength.

Steel expands 20 per cent less than copper, and this would cause less broken stay bolts, which are caused by the uneven expansion of the inner and outer sheets, causing the bolts to stand at a different angle through the thread when they are thus expanded. The strain is greatest next to the outer wall and the bolt will break at this place.

If copper was applied to engines with 200 or 210 pounds pressure, I am of the opinion that if several of the bolts should break in a

bunch, the strain on the surrounding bolts would be so great as to shear the thread off the sheet, and the bolts would pull through.

On account of the different amount of expansion of the two metals, steel patches on steel sheets and copper patches on copper sheets would be preferable. Steel fire boxes being preferred in high pressure engines only, because there would not be danger of shearing of the thread in the steel sheet under great pressure, which might be possible in copper sheets, as the metal is very soft.

Steel tube sheets should be used in all fire-boxes.

E. S. SHUPERT,
Boiler Maker, S. P. Co., West Oakland.

Question No. 16. "By what methods may we obtain the most economy in locomotive firing?"

Answer. Having had considerable experience in this line, I find the most economical method of firing our locomotives with the open baffler door, is by keeping the fire even over the entire grate surface, and as light as practicable; this allows the air to have free access to the fire, and aids combustion; applying a small quantity of coal at regular intervals, covering the fire very light when required, keeping the entire fire bright and of the same appearance, and as near a uniform temperature as possible. This insures proper combustion, and prevents waste of fuel by passing to the atmosphere unconsumed in black smoke; but it requires good judgment on the part of the fireman, to be practiced at all times, to obtain the best results in locomotive firing.

I am of the opinion that no established rule can be followed successfully, as the draft, the grate, the quality of coal, and the difference in general construction of engines must all be taken into consideration.

L. S. AYER,
Traveling Fireman, Sacramento Div., S. P. Co., Sacramento.

Question No. 18. "Is the compound locomotive doing its best in point of economy? If not, may it be improved?"

Answer. In answer, I will say that the Compound Locomotive has not reached its best in point of economy, from the fact that continual improvements are being added, which, in nearly all cases,

have served their intended purposes to better the performance of the Compound Locomotive.

The latest of these improvements are, the improved Intercepting and separate Exhaust Valve, and the Piston Valve, applied to high pressure side.

In regard to the query, as to how the Compound may be improved, the only solution to this is to keep up the good work of betterments.

T. W. HEINTZELMAN,
M. M., Sacramento Div., S. P. Co.

THE CHAIRMAN: The next in order is the Discussion of papers read at the previous meeting. At the last meeting a paper on Train Delays, was presented. Is there anyone who wishes to take up this question tonight.

MR. B. A. WORTHINGTON: As the report of the proceedings of the last meeting of the Club has just been distributed, I regret I have not had time to make more than a cursory glance at the paper on Train Delays submitted by the Committee, but my attention is attracted to that portion referring to "overloaded trains," in which the Tonnage Rating is given a rather severe scoring, but I trust that after the system is better understood, and after the paper which I have prepared for presentation tonight on the subject of Tonnage Rating, shall have been digested, that it will remove many of the general objections stated in the report of the Committee.

In replying to the criticisms made by the Committee, it is probably within reason to assume:

First—That any system of calculation that is designed to reach a result, that is based on mechanical principle, using data for the premises that has been derived from a series of careful practical tests, with appliances that give the measure of the results in tangible form for purposes of calculation, ought to be more nearly correct than simply "guess-work," which was formerly the practice in train loading before the tonnage rating system was in vogue.

Second—It will probably be admitted by the Committee, that the traction of a locomotive under stated conditions of piston speed and steam pressure can be calculated.

Third—The Committee will probably agree that tests to determine train resistance, under varying conditions, can be fairly measured by a dynamometer car, the sensitive machinery of which registers the pull on the draw-bar.

Fourth—That indicator cards taken from hundreds of locomotives may fairly be considered to show the maximum available boiler pressure and the drop in the traction with the increase of the piston speed. Such data has been accepted as standard by the Master Mechanic's Association and by the leading locomotive builders of the country, from which mean effective pressure curves have been plotted.

Admitting these premises, let us inquire what has been done.

The resistance curve used was made by the late Arthur M. Wellington, from extended experiments which he conducted on the Lake Shore and Michigan Southern Railway, a complete report of which was made to the American Society of Civil Engineers in February, 1879. In my paper to-night, I will undertake to sustain the correctness of this curve, in so far as this company's lines are concerned, as demonstrated by personal tests made by myself.

The mean effective pressure curve was made by Mr. F. W. Mahl, Mechanical Engineer of our company, and the best evidence that can be adduced in support of its approximate accuracy is that it falls about on the middle ground between two such standard authorities as the Master Mechanics' Association and the Schenectady Locomotive Works.

Every piece of track was figured from one end to the other of each freight run, to arrive at the resistance offered and determine the load that could be taken at different speeds with each 1,000 pounds of locomotive traction, as I will explain in the paper to be presented.

Now, after all this had been done, and before making a rating for a single run, I obtained reports from each division for three weeks' trains, showing the loads that were being daily taken, and the time that was made. I reduced the heaviest load that was taken within the schedule time to the number of Ms of load per 1,000 pounds of traction actually taken, which in nearly every instance checked closely with the theoretical calculations. Now, if one engine can take a given load with 1,000 pounds of traction, manifestly it is fair to assume that another engine should get as much work out of 1,000

pounds of traction, the conditions being exactly the same in both instances. If the committee will select a specific run where it is claimed that the rating is too high, I will promise to show the basis of the rating, and will further promise to give the date and number of a train in regular service that took a load, within the schedule time, that will sustain the basis of the rating. As for the excessive over-time shown in the committee's report, the committee has struck the key note to the situation, wherein they say that it would be quite impossible to make the *schedule time* with the rating, simply because the schedule is too fast. This statement might be made stronger by saying that it would be quite impossible to make many of the through schedules with any sort of load for the power used, yet competitive conditions are forcing us to make even faster time than now.

To explain myself, let us select a few through runs where they are not taking the rating, but where the Superintendent is taking the best load he can, thereby eliminating entirely the question of tonnage rating having anything to do with the result.

Ogden to Terrace, 124 miles, they are taking about 75 per cent of the rating.

The card time during October was	7 h. 40 m.
Average time consumed in stops on all through trains on this run during October, ...	2 h. 27 m.
Time needed, Blue Creek to Promontory, 11.43 miles, on heavy helper grade, ...	1 h. 0 m.
Time needed, Kelton to Red Dome, where helper is used, 26 miles, at 15 m. p. h., which any trainman running on that piece of track will tell you is very fair speed with a heavy freight train, ...	1 h. 44 m.
Minimum time on card, Promontory to Lake, ...	46 m.
Minimum time, Red Dome to Terrace, ...	15 m.
Total time for this portion of mileage, ...	6 h. 12 m.

Leaving only 1 hour and 28 minutes to run the remaining 63 miles, or at a speed of 43 miles per hour, which of course is impracticable.

I have taken the Salt Lake Division for example, as this division shows the largest amount of over-time. An analysis of every through freight run on the Salt Lake Division shows a similar condition, and it cannot be maintained that the rating is in any way responsible for delays on runs where the rating is not being taken.

I fear I am encroaching upon the time of others in this discussion, and as I have quite a lengthy paper on the tonnage rating question to be presented to-night, I beg pardon for taking up so much time.

THE CHAIRMAN: Is there any one else who wishes to say something on this subject. Inasmuch as the report of proceedings was not distributed until a late date, it might be well to postpone the discussion of this subject and of the answers to questions to the next meeting.

The next in order is the presentation of papers or reports. I think that Mr. B. A. Worthington has a paper for this evening which we shall be pleased to listen to.

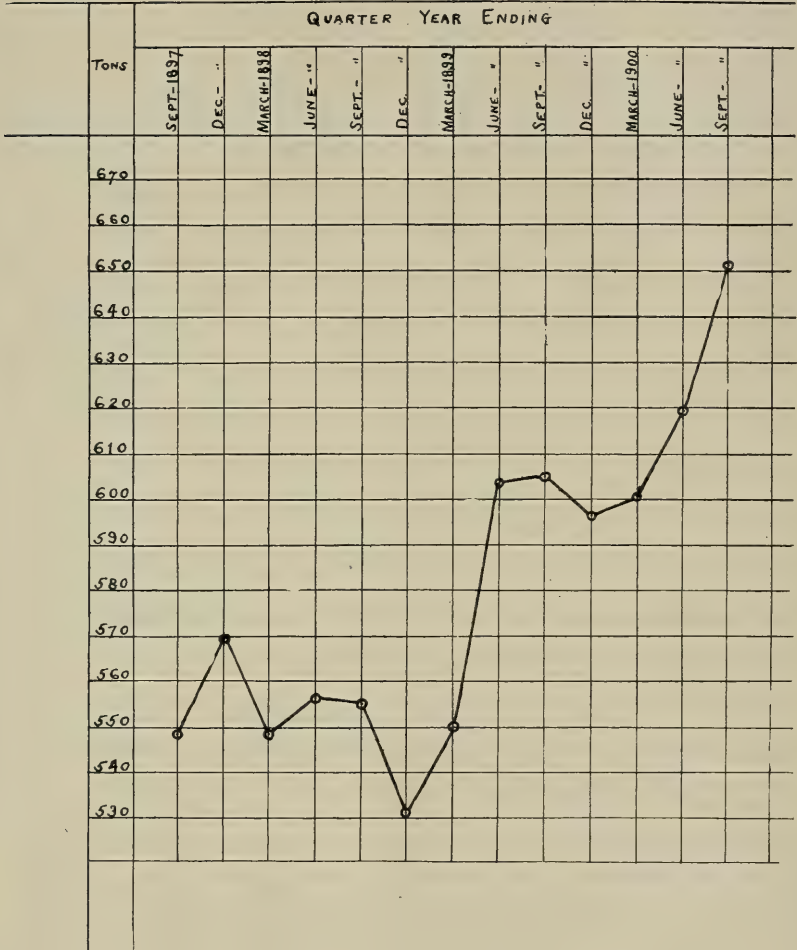
TONNAGE RATING OF LOCOMOTIVES.

Mr. President and Gentlemen :

You could not have chosen anyone to address you on the subject of this paper, who would have labored with a heartier good will to prepare something that would interest your members than I, because, the question of rating locomotives on the tonnage basis is one which has always impressed me with being in the direction of producing the utmost economy in the movement of freight from one point to another. When I was transferred from the Motive Power Department nearly thirteen years ago, to go into the General Manager's office, I had a primitive plan for establishing a Tonnage Rating, which I submitted, but as, at that time, trains did not leave terminals with sufficient data to even approximate the weight of the contents of the cars, nothing was done.

The first tonnage rating was introduced by General Manager Kruttschnitt, on all Pacific system divisions, July 1, 1897, the result of which is clearly pictured on the attached graphic chart, marked "A," showing the gross tons hauled per freight engine on Pacific System, since the commencement of the tonnage rating in July, 1897. The year previous to its introduction, the tons of revenue freight per freight engine mile averaged 188. During the two years following July 1, 1897, this load increased to 207 tons, whilst in the third year, or year ending June 30, 1900, it had grown to 235 tons. The new tonnage ratings were completed and put into general effect in the spring of 1900, and for seven months ending Sept. 30, 1900,

EXHIBIT "A"
 GROSS TONS HAULED PER FREIGHT ENGINE, . . .
 S. P. CO.: PACIFIC SYSTEM,
 SINCE COMMENCEMENT OF TONNAGE RATING IN JULY, 1897. . .



when they were generally used, the Pacific system load per freight engine mile increased to 251 tons of revenue freight, or one third more than it was in 1897, before we had the tonnage rating system.

By "tons of freight per freight engine," is meant the net load of freight, excluding weight of rolling stock, moved per freight engine mile, including mileage of engines helping trains or run light in connection with them, while the graphic chart "A" shows the gross weight of the entire train.

As the tonnage rating system first inaugurated did not consider the element of time, and as the sharp competitive conditions rendered it important that a system of engine rating should be established that would include the *time* factor in our calculations, Mr. Kruttschnitt, in April, 1899, appointed a committee on tonnage rating headed by the late Mr. W. G. Curtis, Engineer Maintenance of Way of Pacific System, as Chairman of the committee, the committee being also composed of our worthy President, Mr. H. J. Small, Superintendent Motive Power and Machinery, Mr. F. W. Mahl, Mechanical Engineer, both of Pacific System, and Mr. J. J. Ryan, Superintendent Motive Power and Machinery, and Mr. J. T. Mahl, Engineer Maintenance of Way, the two latter gentlemen of the Atlantic system.

My paper would be too voluminous if I should attempt to outline the very complete system formulated by this Committee, but as my undivided attention has been devoted to the new system for about one and one-half years, I shall endeavor to give you as briefly as possible, the plan on which we worked and the results developed in actual practice, showing how closely the theoretical calculations check with the road performance, which I must confess has been most surprising to me.

A study of this question will demonstrate that it is absolutely impracticable to arrive at a mathematically exact system of engine rating, owing to the complexity of the conditions and constantly varying factors involved, which forces us to deal with approximations gained from the best obtainable data to be found and from our own experience. For example, two of the most important factors in the calculation, are Train Resistance and Mean Effective Pressure on the engine piston, which are ever-varying. For these we can only take average conditions, and our system will at least have the merit of being uniform in its application on the different divisions, rendering comparisons on a fairly equitable basis.

With your kind indulgence, I shall proceed to take up the different features of this question separately, as follows:

VALUE OF MOMENTUM.

All engineers know what it is to get a run at a short hill when drawing a heavy train. The energy gained by momentum can be reconverted into work at any time without loss, and its amount for any given velocity may be very simply determined by the formula—

$$\text{Vel. head} = \frac{V^2 \text{ in feet per sec.}}{64.32} = \frac{1.467^2 V^2 \text{ (in m. p. h.)}}{64.32} = 0.033445V^2$$

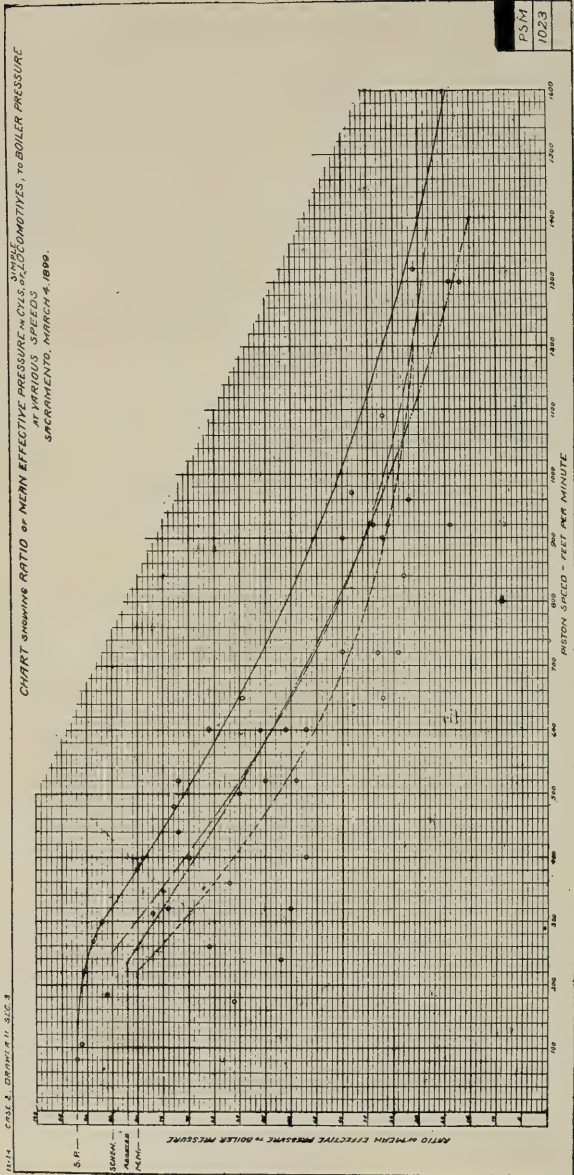
To which should be added 6.14 per cent for energy due to rotation of the wheels, making $= 0.002055V^2$ a total of $0.0355V^2$. A complete table of velocity heads, based on this formula, which was used in our calculations, appears on pages 335 and 336, table 118, Wellington's Economic Theory of Railway Location.

TRAIN RESISTANCE.

We used as a basis the curve between 10 and 35 miles per hour, as developed by the late A. M. Wellington, plotted on page 518 of above work, which was deduced from exhaustive experiments which he made on the Lake Shore and Michigan Southern Railway, in June and July, 1878. While later resistance curves have been made showing somewhat less resistance above 15 miles per hour, yet between the speeds which we used the Wellington curve, viz., 10 and 35 m. p. h., the actual practice on this road sustains the Wellington curve, as I will undertake to demonstrate before I get through.

TRACTION OF LOCOMOTIVES.

This was arrived at through mean effective curves prepared by the Motive Power Department Blue Print PSM., 1023, showing curve for simple engines submitted with this paper. As the adopted curve strikes about the middle ground up to 300 feet per minute piston speed, between such standard authorities as the Master Mechanic's Association and The Schenectady Locomotive Works, and since for rating purposes the traction used falls below a piston speed of 300 feet per minute, the engine traction based on the



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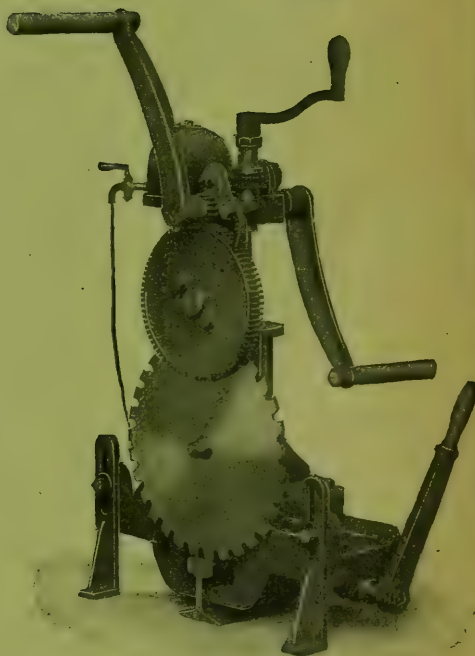
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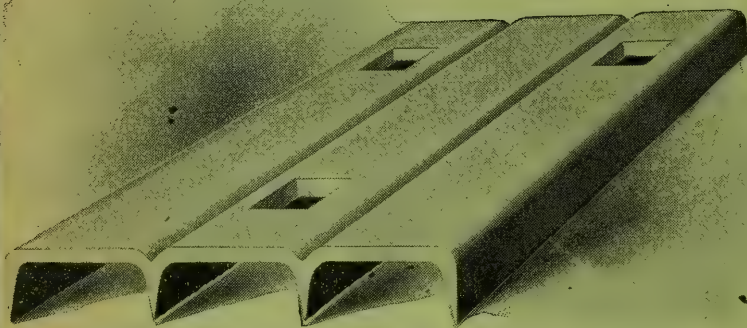
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adopted curve cannot be far astray; in fact, the results in actual practice seem to approximately verify the correctness of the adopted curve, that is, in so far as meeting the operating conditions found on Pacific System lines is concerned.

Using the foregoing data, a table was made showing the number of Ms. (1,000 lbs.) of load that should be hauled with each unit of power (1,000 lbs. of available engine traction being taken as 1 unit) at the different speeds and under varying conditions of gradient, the curve resistance being figured separately on the assumption that up to 7 degrees = .4 lb. per degree, and from 7 to 10 degrees, .5 lb. per degree per M of load. The first column shows the piston speed of Basic engine used in the calculations, and as another engine of different ratio of length of stroke to driver diameter would show a different piston speed at a given speed in miles per hour, a co-efficient table was prepared to show the relation *on the basis of piston speed* to the Basic engine.

The next column shows speed in miles per hour.

The next column shows velocity head at different speeds, copied from Wellington's table above referred to.

The next column takes the traction of the Basic engine at 265 feet piston speed per minute as 1,000, and the drop in the traction conforms to the adopted mean effective pressure curve just spoken of.

The other columns show Ms of load that can be taken with each unit of power under the conditions shown. For example, at 20 m. p. h. the traction is 750, and it is desired to know what can be done on a 0.4 grade; by following the horizontal line leading from 20 m. p. h. to intersection of vertical column under .4 grade, 100 is found. This is obtained by dividing the grade resistance (20 times the per cent per ton) $.4 = 4$ lbs. per M + 3.5 lbs. for train resistance, total resistance, 7.5 lbs. per M, into the 750 lbs. of traction, which equals 100.

With the foregoing data in hand, an "Operating profile" was made by checking over each section of track, plotting the equivalent grades and velocity heads, with allowance for resistance from curvature, as above.

The column of velocity heads corresponds to the "vertical distance through which momentum alone can lift a train moving at any

given velocity against the force of gravity," and on the other hand, measures the work which has already been done in accelerating the train to the given speed. Following out this method, an equivalent profile was constructed modifying the actual profile; velocity heads were plotted at different points along the track, and lines drawn joining these velocity heads, measuring the grades the resistance from which equals the power consumed or acquired by change of speed or elevation. From these lines a table was prepared showing the load in Ms that could be taken at different speeds between 10 and 35 m. p. h., for each section of track on every division, and from this table we prepared a time-load diagram, based on the most economical load consistent with the time limit, that could be taken per unit of engine power, showing the number of minutes net time that should be consumed and the average speed in m. p. h. that should be made with the prescribed load. To be on the safe side, all time lines were based on trains of empty cars, the resistance per weight unit of which, as is well known, is greater than for loaded cars.

The question of constructive weight allowance for empty and unloaded cars was fully considered, which, in making less allowance on gradient sections, is based on the fact that only the rolling and atmospheric resistance are greater per weight unit of empty cars, than per weight unit of loaded cars.

From the time-load diagram, the Mechanical Engineer prepares a rating sheet, from which it will appear that every engine on the division is rated upon the same basis, that is to say, each engine is to take a given load in Ms for each unit of engine traction, and the traction of each engine is figured at a speed of ten miles per hour, using the adopted curve to get the mean effective pressure, *when such traction does not exceed $\frac{1}{4}$ of the driver weight*. There is an error in this method, which has the effect of materially reducing the engine power units of engines falling in the lower groups to an absurdly low figure, which could be avoided by others who might use this tonnage rating system, by having a traction table based on piston speed, *because the co-efficient table showing relation of other engines to the Basic engine is based on piston speed*, then taking the power units for all engines from same piston speed as the Basic engine shows. For example, if the Basic engine has a piston speed

at 10 miles per hour of 265 feet per minute, let the power units of all other engines be taken from the traction calculated from 265 feet piston speed per minute (not 10 miles per hour) which produces a more nearly accurate result.

In applying the co-efficient table to a traction table based on the calculated traction at 10 miles per hour, for engines that fall in the lower groups, the result is to reduce the power of the engine to an absurd point as explained above, but the application of the co-efficient table to a traction table based on piston speed is in exact harmony with the drop in the traction of long stroke engines as developed by the Mean Effective Pressure curve.

Another error that could be avoided by others, which has its effect in producing a speed for the time-line on the heavy grade lines that is impossible to attain, arises from the false assumption that heavily loaded trains on steep grades can get started from a stop and attain a speed of 10 miles per hour, in a distance of 2,000 feet, when as a matter of actual practice, it often happens that a speed of 10 m. p. h. cannot be reached at all on the heavy grade line.

In assuming train-lengths, it would also be more nearly correct, to first determine the maximum train length for each division from actual practice, which can be readily done, than to assume 2,000 feet train lengths for both hill and valley sections, as 2,000 feet is likely to be nearly or quite twice the actual length of a double-header train on a steep gradient line.

These, of course, are minor errors in the original computations, which we are gradually working out in the practical operation of this system, and the results thus far developed are certainly very satisfactory.

UNITS OF POWER IN THE ENGINES.

I have been asked several times by practical railroad men, why we did not take some proportion of the driver weight to arrive at the units of locomotive power. When we commenced our work, we proposed to use $\frac{1}{3}$ the driver weight, but as we proceeded we made a careful check of the actual performance on the road, ascertaining that on the Los Angeles, Western, Salt Lake divisions and Lines in Oregon, it was a daily practice to take loads that required the exertion of $\frac{1}{4}$ the driver weight, hence a rating based on $\frac{1}{3}$ the driver

weight, would largely underload these engines. Further study of the question showed that of 38 different classes of locomotives on this system, the relation that the maximum traction bears to the driver weight varies from 16.6 per cent to 31.4 per cent, from which it will be obvious that any proportion of the driver weight as the basis for power units, was entirely out of the question.

On the other hand, power units derived from traction on the basis of cylinder power, uniformly applied to all engines, and limited by $\frac{1}{4}$ the driver weight, gives a result that is fairly comparable for all the engines and the principle has the additional merit of being based upon mechanical law.

ACTUAL PERFORMANCE.

Daily efficiency reports are sent to our office from each division of the Pacific System, and the results are most gratifying on every division where the assumed time allowance for stops of one-half minute per mile on through freight, which I understand was originally agreed to by the various Superintendents, happens to be enough to cover the time actually required for station, water and meeting stops.

As an illustration of how closely the theoretical calculations fit the practice, with your kind indulgence, I will give you results of some personal tests which I have made. In the month of June, 1900, I visited the Tucson Division, making four tests, as follows: Test No. 1 was from Tucson to Gila Bend, 128 miles. Our figures showed that a load of 2,600 Ms net weight of train should be taken with a "DA" ten-wheeler, with helper, over the Estrella Hill, in 5 hours and 15 minutes, net running time between stations (excluding stops); the actual performance was 2,623 Ms in 5 hours and 2 minutes.

Test No. 2 was with this same train and same class of engine, from Gila Bend to Yuma, 123 miles. Our figures showed net running time 6 hours and 5 minutes, while actual performance was 7 hours and 14 minutes, a difference of 69 minutes, nearly all of which was consumed in a poorly arranged "double" over the Mohawk Summit, where they used 1 hour and 27 minutes, and the engine had to be favored at other points owing to bad water.

Test No. 3 was with same class of engine, from Yuma to Gila ,Bend 123 miles, with net load of 2,127 Ms, which our figures showed should consume net running time of 6 hours and 13 minutes; actual performance was 5 hours and 58 minutes.

Test No. 4 was from Gila Bend to Tucson, 128 miles, same class of engine, and with net train-load of 2,373 Ms, which our figures showed should consume 6 hours and 51 minutes net running time; actual performance was exactly 7 hours.

In September, I visited the Salt Lake Division and made some tests resulting as follows :

Test No. 1 was with one of the new mogul engines, 20x28 cylinders and 124,400 lbs. on drivers with 190 lbs. of steam, from Ogden to Terrace, 124 miles, with net load of 2,365 Ms, which our figures showed should consume net running time of 5 hours and 28 minutes ; actual performance was 5 hours and 38 minutes, certainly a very close check.

Test No. 2 was from Terrace to Wells, with same train and same class of engine, having 40 Ms in excess of rating. The actual running time was 5 hours and 16 minutes on a 6 hour and 5 minute schedule, but as we were delayed by stops 1 hour and 43 minutes, we were nearly an hour late of the schedule, yet on the basis of half minute per mile time-allowance for stops, the distance being 95 miles, we would still be within the schedule, if a half-minute time allowance for stops were enough.

Test No. 3 was from Wells to Terrace with 2,383 Ms drawn by a Mogul. Our calculations allowed 4 hours and 13 minutes net running time; actual performance was 4 hours and 9 minutes; within four minutes of our time.

Test No. 4 was with a sixty car train (excluding caboose) consisting of 20 loads and 40 empties, 2,500 feet long, net weight of train being 2,697 Ms. Our figures allowed net time of 5 hours and 48 minutes; actual time was 6 hours and 12 minutes, only 24 minutes apart on a run of 124 miles, over a very heavy division with many sidings too short for the train and with water stations too far apart to permit of engines working to their full capacity unless provided with larger tanks, hence this test was a crucial test of our figures; notwithstanding the unfavorable conditions, we were only 24 minutes apart as shown above.

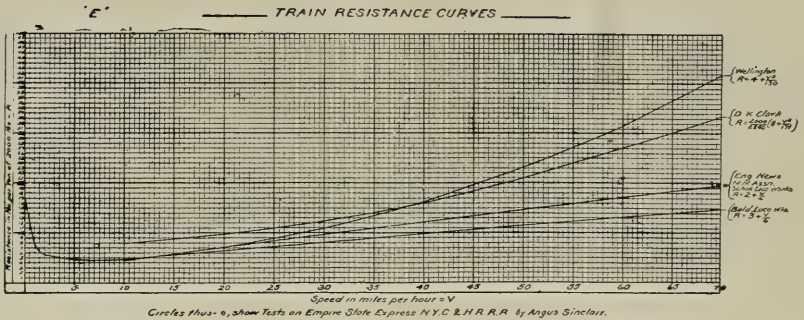
After my departure, Traveling Engineer, W. J. Toy, who aided me greatly in making these tests, and who is perhaps one of the best practical railroad men in the country, made a test of the rating from Carlin to Wells, keeping all the data needed to make the analysis, with 2,328 Ms, on which our figures showed net running time of 3 hours and 58 minutes for the 80 miles; the actual performance was 4 hours and 15 minutes, only 17 minutes apart, yet ten minutes of this was lost on account of slow flags of trackmen where extended rail renewal was in progress.

I am very glad of the opportunity to show results of these tests, because in none of the above cases, on account of considerable delays, did we come within the schedule time, and the results of these tests was not generally understood, yet the figures demonstrate conclusively the correctness of the system we have adopted, as we aim simply to give the net running time that should be consumed between stations with a given load, and to establish a rating for the engines on this basis; it is extremely doubtful whether any system yet devised can reach a closer approximation than is shown by the above tests.

From these tests it is quite clear, that if there is anything wrong with any rating that has been established, it is in the time-allowance for stops, and we are now keeping data in our office that will enable us to determine just how much time is being consumed in stops on through freight on each freight run. This will also be valuable for comparison of work of dispatchers and trainmen on different divisions, and on same division by comparing one month with another.

WELLINGTON TRAIN RESISTANCE CURVE VERSUS CURVES OF LATER DATE.

I have been asked several times why we did not use a later resistance curve than the one plotted by Wellington in 1878, and what the effect would be if we had used a later curve. I submit with this paper, a little chart (marked "E"), showing the Wellington curve plotted alongside of the Clark curve, and the curves of the Baldwin Locomotive Works, with a curve made from formula of Master Mechanics' Association, the Schenectady Locomotive Works and the "Engineering News." Bear in mind, we used the Wellington curve



up to a speed of 35 miles per hour. For rating purposes, as will be obvious, the resistance would naturally be taken at the limiting point, where the engine would be working the hardest, and we have assumed this to be 10 miles per hour, although all practical railroad men know that trains can often be kept moving even at as slow a speed as 3 miles per hour. However, at 10 miles per hour, which is on the safe side, as it favors the engine, the variation between Wellington and Baldwin, the latter being the lowest, is slight, Wellington being 4.8 lbs. per ton, against Baldwin 4.5 lbs. per ton, the Schenectady curve being between these points. There is a difference of only 6 per cent between Wellington and Baldwin, but this difference means less resistance than Wellington; hence the effect would be to slightly increase the rating, and if we had used either of the other curves for the intermediate speeds between 10 and 35 miles per hour, the effect would be to increase the speed of the time-line plotted on the time-load diagram, which our daily reports of actual running time consumed on each run demonstrates, is quite fast enough; this fact is further evidenced by the tests to which I have just made reference. Therefore, it would seem conclusive that for conditions of railroad operating on Southern Pacific lines west of El Paso, the Wellington curve between 10 and 35 miles per hour seems to fit the situation more closely than resistance curves based on later formula.

One word more on the question of train resistance: There is a factor affecting train resistance that has not been considered in any formula although it has a most important bearing, as shown by the following memorandum, which speaks for itself—I refer to the question of weight of rail and condition of track:

Mr. P. H. Dudley, an acknowledged authority on this subject, who has given the question of train resistance many years of study, reports to the International Railway Congress as follows :

Bulletin International Railway Congress, No. 6 :

June, 1900. Page 1733.

(From report of Mr. P. H. Dudley, Inspecting Engineer N. Y. C. & H. R. R. & Boston & Albany R. R.)

"Some of the recent New York Central and Hudson River Railroad Mogul engines, having cylinders 20 x 28, total weight 248,800 pounds, and at a speed of 20 miles per hour can draw 80 loaded 60,000 pounds capacity cars. These Mogul engines are known as class "P," and are daily drawing 75 to 80 60,000 pounds capacity cars between Buffalo and Albany. The resistance per ton of these heavy trains at 20 miles per hour, is only about $3\frac{1}{2}$ pounds per ton, on the $5\frac{1}{8}$ inch smooth 80 pound rails.

"Page 1734. On August 19, 1899, engine 948 drew train 11, South-western Limited, of 16 cars. The total length of the train from tip of the pilot to rear buffer was 1,212 feet. The total weight of train exceeded 920 tons. This is the longest and heaviest passenger train ever run in the United States, and attained a speed of a mile a minute.

"These two examples, one of an 80 car freight train, and the other of a passenger train, show that the train resistance, on the stiff, smooth rails and 3 tie joints has been reduced to a low limit. The question of "condition of the track" as affecting train resistance, has not been considered in any formula, though it is one of its prime factors. I found out this fact 25 years ago, in my first experiments on train resistance, and by improving the tracks and freight cars, the resistance has been reduced from 7 to 8 lbs., to 3 and $3\frac{1}{2}$ lbs. per ton, for good track on 80-pound rails. The resistance for the 80 freight car train is given by indicator cards between speeds of 15 to 25 miles per hour, as represented by the formula $R = 1 + \frac{V}{8}$; in which R = the resistance per ton, and V = the velocity in miles per hour."

The Mogul engines referred to are an exact counterpart of the Moguls in use on this company's lines.

The resistance of $3\frac{1}{2}$ lbs. per ton at 20 m. p. h. is exactly one-half what we have used at same speed, hence the importance of keeping the track up in good shape, if the Superintendent wants to make a good showing in relative efficiency, average train-load and cost per ton mile.

As a matter of interest, I have indicated on chart showing resistance curves, some pencil dots showing resistance in pounds per ton, on Empire State Express by Angus Sinclair, which was, I think, part

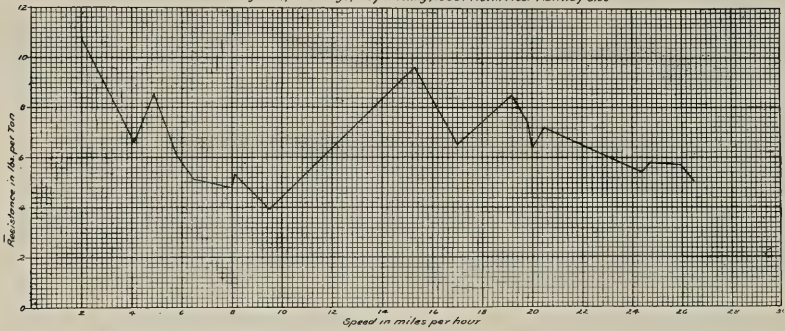
of the data from which the formula $R = 2 + \frac{V}{4}$, was deduced. While these results conclusively show that for high speed service, Wellington's formula is too high, yet it must be remembered that these tests were made on a $5\frac{1}{8}$ smooth 80 lb. rail, where another expert authority, Mr. Dudley, has found that the resistance per ton in freight service, at 20 m. p. h., is just one-half what we have used in our calculations on this road. If the track conditions make such a marked difference in resistance at freight train speeds, assuredly there should be a proportionate difference at high speed. If this reasoning is correct, then

the formula $R = 2 + \frac{V}{4}$, deduced from experiments on some of the best track in the world, would hardly apply to such varied conditions of track as exist on the Southern Pacific Company's lines.

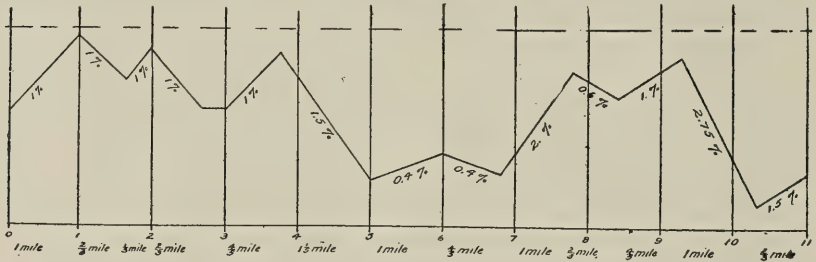
I have been asked several times if we would not have obtained closer results by using a dynamometer car, but I am not exactly clear how a dynamometer car could be used in making a *time-load* diagram, on which we show the time to be made with a given load between every two stations. To explain myself: I have the report of the May meeting of the Northwest Railway Club, containing a table of results for train resistance, obtained from a dynamometer car test made by the Minneapolis, St. Paul and Sault Ste. Marie Railway last winter, and while, it was said, the results were not as uniform as could be wished, "*they were as satisfactory as those usually obtained.*"

From this table I have plotted the irregular line, shown on attached chart (marked "F"), showing the train resistance. Surely such a test does not give any true idea of the increasing resistance with the increase of velocity, and it would be difficult to calculate a *time-line*

Resistance Curve from Table showing results obtained from Dynamometer Tests on M.S.R. & S. Ste Marie Ry.
Page 38, proceedings, May meeting, 1900. North West Railway Club



for a freight train from such imperfect data. It is quite evident that Wellington understood this perfectly, as in pages 348 and 349 of his Theory of Railway Location, he shows an undulating piece of track eleven miles long with varying short grades, which at high speeds was operated virtually as a level track, the momentum carrying the train over the short grades. On page 349 he says :



"Now if we had used a dynamometer record of the tension on the draw bar during such a run as this, which the writer (Wellington) has made many times over that identical piece of track at approximately the assumed velocities, we should find it absolutely uniform and unvarying, without any appreciable trace or evidence in the recorded strains that there were any undulations in grade or deviations from a perfecting level on the stretch passed over."

Does not this demonstrate that a dynamometer test simply gives the reading at the time of the test? It certainly does not give the capacity of the engine, and even if we had a dynamometer car, we

could only make extended experiments from which we could make a resistance curve to be used in our calculations the same as we have used the Wellington curve and it is questionable whether it would meet the conditions here any better than the Wellington curve, because as I said before, the results obtained in actual practice, check more closely with the prescribed ratings than our most sanguine expectations could hope for.

While we feel that we have a very complete system of tonnage rating on this system which is showing splendid results, yet I am frank to confess that I honestly believe the subject of tonnage rating is really in its infancy today. We are making progress, however, and the next few years will develop great strides in this branch of railroad work, that is deserving of the careful study of all practical men.

Respectfully submitted,

B. A. WORTHINGTON,

In Charge Tonnage Rating So. Pac. Co.

THE CHAIRMAN: The discussion of this paper will take place at the next meeting. As this closes our regular order of business for the evening, I would ask if any member present has anything to say for the good of the Club.

I understand that Mr. W. M. Shear has some pictures taken of the members of the Club who made the trip to Mt. Lowe last month, and is ready to distribute them to such members.

There being no further business a motion to adjourn was carried at 10:10 o'clock.

E. A. GILBERT,

Secretary.

At the next meeting of the Club, which will be held at Sacramento, December 15th, a paper on "Springs and Spring Making," will be presented by Mr. G. H. Smith, Foreman of the Spring Shop at Sacramento.

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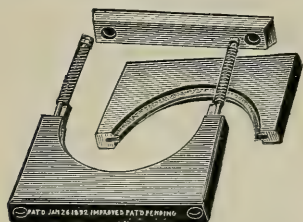
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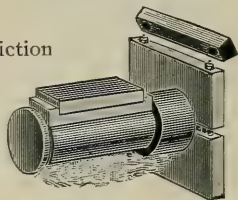
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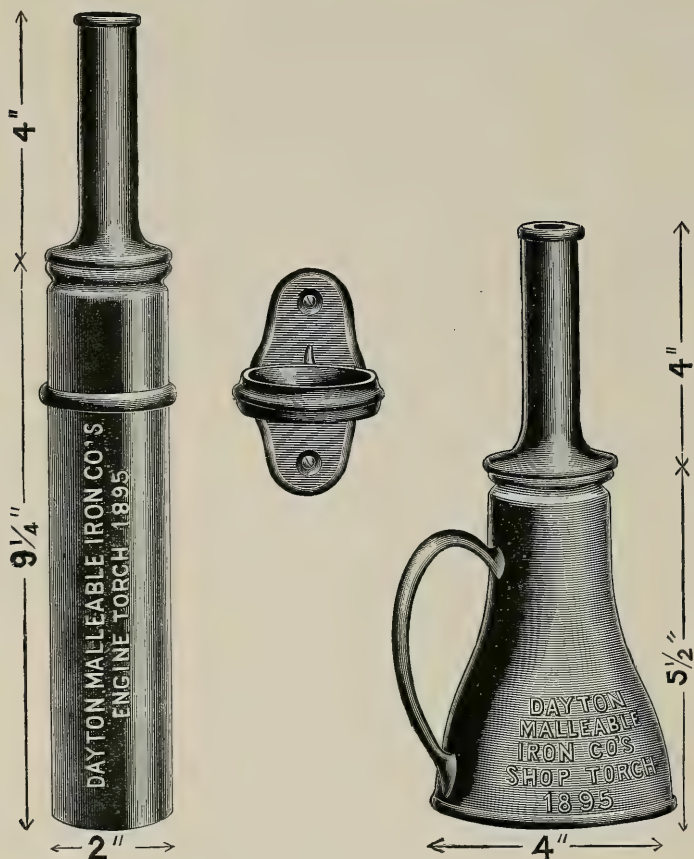
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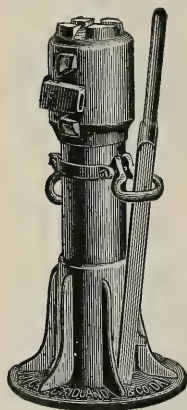
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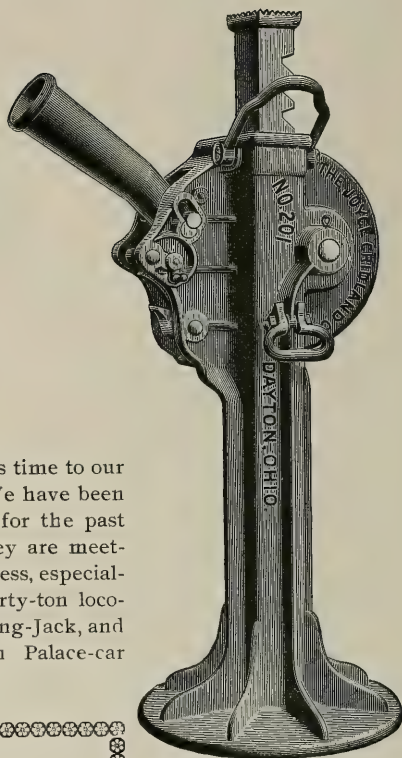
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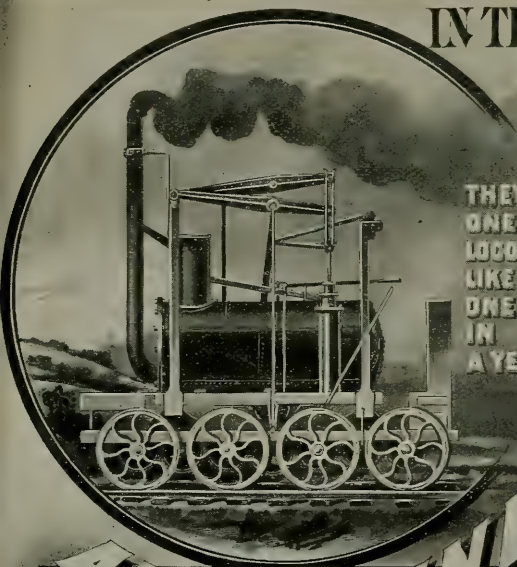
We invite correspondence, which we believe will result to your advantage.



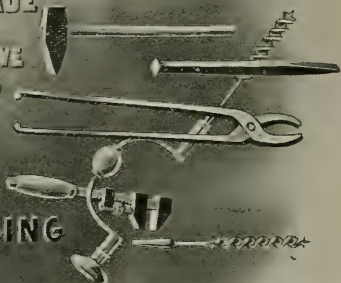
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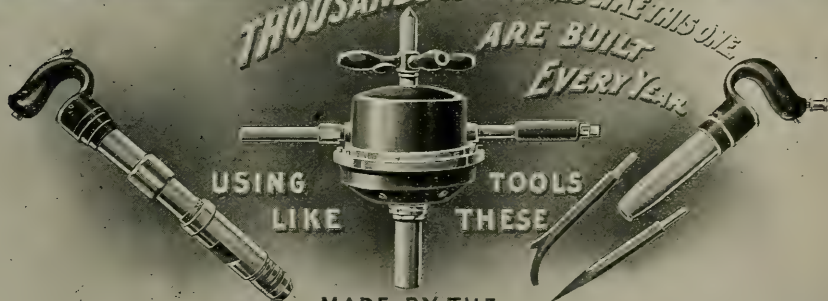
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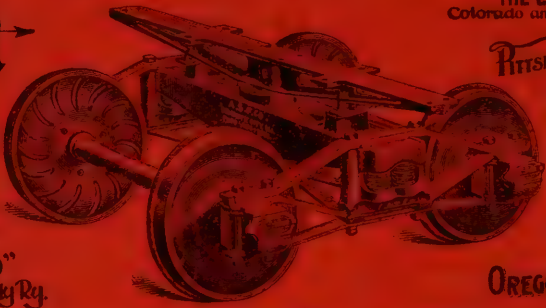
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